C601
48

JOURNAL

OF THE

OF CALIFORNIA
28 1945
LIBRARY

AMERICAN VETERINARY MEDICAL ASSOCIATION

ME CVII, NUMBER 825 DECEMBER 1945 TABLE OF CONTENTS, PAGE II

LET'S SEE

What the "V" Stands For

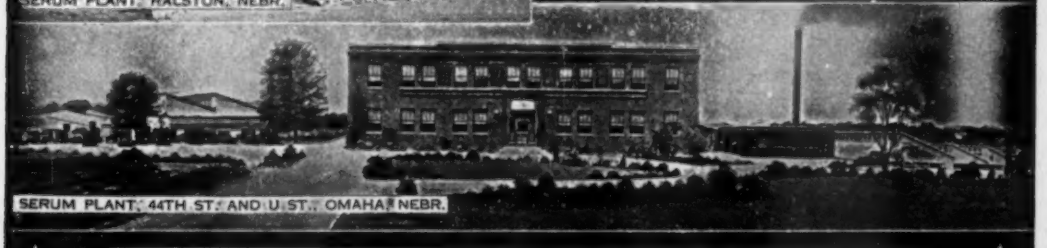
It stands for a world reconverted to peace and plenty by forging the defense of livestock farming—the strength of agriculture—the source of protective human subsistence—the background of industrial progress;

It stands for the science of comparative medicine, intelligently planned and vigorously pursued for the betterment of rural life and its far-reaching awards to society—for the "V" in veterinary school, veterinary research, veterinary practice, veterinary ethics, and many others; and it also stands for

The fighters of farm-animal plagues who dedicate their lives to the "V" in Victory over repugnant designs to break down their defense of national security.

HOME OFFICES AND BIOLOGICAL LABORATORIES, OMAHA, NEBR.

SERUM PLANT, RALSTON, NEBR.



SERUM PLANT, 44TH ST. AND U ST., OMAHA, NEBR.

The Corn States Serum Co.

Omaha Nebraska

Journal
of the
American Veterinary Medical Association
Copyright 1945 by American Veterinary Medical Association
600 S. Michigan Ave., Chicago 5, Ill.

VOL. CVII DECEMBER, 1945 NO. 825

How May the Incidence of Tuberculosis in Hogs Be Reduced?

E. S. DICKEY, D.V.M.
Ottumwa, Iowa

FOR A NUMBER of years, especially since tuberculosis in cattle has been practically eliminated, livestock sanitary authorities have been teaching that tuberculosis, as this disease occurs in hogs at the present time, is due almost entirely to allowing swine and old tuberculous chickens to feed together; that if swine and old tuberculous chickens were not permitted to feed together, tuberculosis in swine should decrease to the vanishing point. Inasmuch as the practice of keeping swine and old chickens apart has been advocated for many years, one wonders whether this is being done to any considerable extent on farms where both swine and chickens are raised. Quite a definite answer to such an inquiry may be obtained by comparing the percentages of tuberculous hogs and their parts as found for different periods by veterinary inspectors in the federal meat-inspection service in the postmortem examination of these animals. It must be apparent that when percentages for two periods are to be compared, the longer the periods are the more accurately will the respective percentages reflect the prevalence of disease.

During the last thirty-six months, the report forms in use by John Morrell & Co., covering the slaughter of hogs, permit of an easy and accurate comparison of the incidence of swine tuberculosis prevailing in the territories from which our plants get their hog supply. Because of the great public interest being manifested in the project of swine-tuberculosis control, a survey has been made at the three Morrell plants to discover whether or not any actual progress is being made to control this disease in the territories where these plants are located. For the purposes of this sur-

TABLE I—The Postmortem Disposition of Hog Carcasses and Their Parts Which Were Affected with Tuberculosis for the Periods Indicated

18-Month Periods Ending	Plant 1	Plant 2
	Carcasses Passed for Cooking (%)	
Oct. 31, 1942	0.035 (a)	0.046 (a)
Apr. 29, 1944	0.023 (aa)	0.043 (aa)
Gain	0.012 (aaa)	Gain 0.003 (aaa)
	Heads Passed for Cooking (%)	
Oct. 31, 1942	4.51 (b)	8.54 (b)
Apr. 29, 1944	3.77 (bb)	8.19 (bb)
Gain	0.74 (bbb)	Gain 0.35 (bbb)
	Carcasses Condemned (%)	
Oct. 31, 1942	0.036 (c)	0.023 (c)
Apr. 29, 1944	0.022 (cc)	0.018 (cc)
Gain	0.014 (ccc)	Gain 0.005 (ccc)
	Heads Condemned (%)	
Oct. 31, 1942	2.31 (d)	2.31 (d)
Apr. 29, 1944	2.44 (dd)	2.10 (dd)
Loss	0.13 (ddd)	Gain 0.21 (ddd)
	Viscera Condemned (%)	
Oct. 31, 1942	5.39 (e)	5.98 (e)
Apr. 29, 1944	3.78 (ee)	4.19 (ee)
Gain	1.61 (eee)	Gain 1.79 (eee)
	Viscera Passed for Cooking (%)	
Oct. 31, 1942	0.85 (f)	1.71 (f)
Apr. 29, 1944	0.95 (ff)	1.99 (ff)
Loss	0.10 (fff)	Loss 0.28 (fff)

vey, the percentages of postmortem dispositions of all hog carcasses and their parts, when such carcasses and their parts were found to be affected with tuberculosis, are compared in table 1 for the two, eighteen-month periods as indicated. The differences between the percentages which were found to have prevailed during these two periods represent either gains or losses in the control of swine tuberculosis for the respective areas.

Converting the foregoing percentage gains or losses in these two geographical areas into dollars and cents enables one to more easily evaluate the progress that is being made in swine-tuberculosis control through the keeping of swine and old chickens apart. For computation purposes, these percentages of gains or losses are calculated on the basis of an annual kill of one million hogs. The values assigned to hog carcasses and their parts in table 2 are the values suggested for them by Professor H. R. Smith, general manager, National Livestock Loss Prevention Board, in his 1943 annual report.

In the foregoing tabulation, the percentages showing gains or losses have been converted into dollars showing all details of the computation.

It may be interesting to know what the total losses due to tuberculosis have been during each of the two eighteen-month periods at the respective plants. Therefore, table 3 sets forth only the monetary losses occurring during each of the two periods at each of the two plants. The detail of the computation has been purposely omitted for the sake of brevity; however the method of arriving at their monetary values was identical to the method of computation in table 2.

The only factors that could reasonably be presumed to affect the percentage disposition of tuberculous hog carcasses and their parts on postmortem inspection during these two periods would be:

1) Change of inspectors performing the

TABLE 2—Percentages of Gains or Losses Calculated on Annual Kill of One Million Hogs

SUMMARY OF PLANT 1

	Gains	*Losses*
(aaa) represents 1,000,000 times 0.012% times $17.50 or 120 hogs* @ $17.50	$ 2,100.00	
(bbb) represents 1,000,000 times 0.740% times 35c or 7,400 heads* @ 35c.	2,590.00	
(ccc) represents 1,000,000 times 0.014% times $33.50 or 140 condemned hog carcasses @ $33.50	4,690.00	
(ddd) represents 1,000,000 times 0.130% times 65c or 1,300 condemned heads @ 65c		$ 845.00
(eee) represents 1,000,000 times 1.610% times $1.50 or 16,100 complete sets of viscera @ $1.50	24,150.00	
(fff) represents 1,000,000 times 0.1% times $1.10 or 1,000 sets of visceras* @ $1.10		1,100.00
Totals	$33,530.00	$ 1,945.00
Net gain for eighteen-month period	$31,585.00	
Net gain per month	1,754.72	
Net gain per day (26 day month)	67.49	

SUMMARY OF PLANT 2

(aaa) represents 1,000,000 times 0.003% times $17.50 or 30 hog carcasses* @ $17.50	$ 525.00	
(bbb) represents 1,000,000 times 0.350% times 35c or 3,500 heads* @ 35c.	1,225.00	
(ccc) represents 1,000,000 times 0.005% times $33.50 or 50 condemned hog carcasses @ $33.50	1,675.00	
(ddd) represents 1,000,000 times 0.210% times 65c or 2,100 condemned heads @ 65c	1,365.00	
(eee) represents 1,000,000 times 1.790% times $1.50 or 17,900 complete sets of viscera @ $1.50	26,850.00	
(fff) represents 1,000,000 times 0.280% times $1.10 or 2,800 sets of viscera* @ $1.10		$ 3,080.00
Totals	$31,640.00	$ 3,080.00
Net gain for eighteen-month period	$28,560.00	
Net gain per month	1,586.66	
Net gain per day (26 day month)	61.02	

*Passed for cooking.

postmortem inspections. (This did not occur.)

2) Change in degree of virulence of the tuberculosis organism. (Improbable.)

3) Change in the exposure of the hog population to tuberculosis infection. (Highly probable in this case.)

It was fortunate that during both periods covered by this survey, the same veterinary inspectors performed the final dispositions on portmortem inspection at plants 1 and 2.

The change in the degree of virulence can be ruled out as a contributing factor, since inspectors have observed that the extent of the lesions in carcasses condemned remained quite uniform throughout both periods.

Any change in the incidence of swine tuberculosis during the two periods would be due, therefore, to a change in the exposure of the hog population to the infection of tuberculosis.

CONCLUSION

It is our firm belief that the condemnation of hog carcasses and their parts for tuberculosis in the two geographical areas from which plants 1 and 2 drew their hog supply was more favorable during the second eighteen-month period than during the eighteen-month period that immediately preceded it, solely because more farmers actually heeded the caution, "Keep old chickens and hogs apart." The proportion of the farmers that heeded the admonition, "Keep old chickens and hogs apart," to produce the decreased condemnations in both geographical areas during the latter eighteen-month period can be approximately expressed in the form of a fraction where the numerator is the sum of the losses (aa-bb-cc-dd-ee-ff, table 3) and where the denominator is the sum of the losses (a-b-c-d-e-f, table 3). The values for the terms of this proposed fraction are summarized in table 4.

TABLE 3—Monetary Losses at Plants 1 and 2 During the Two Eighteen-Month Periods

Eighteen-Month Periods Ending	Plant 1	Plant 2
	Value of hog carcasses passed for cooking	
Oct. 31, 1942	$ 6,125.00 (a)	$ 8,050.00 (a)
Apr. 29, 1944	4,025.00 (aa)	7,525.00 (aa)
	Gain $ 2,100.00 (aaa)	Gain $ 525.00 (aaa)
	Value of hog heads passed for cooking	
Oct. 31, 1942	$15,785.00 (b)	$29,890.00 (b)
Apr. 29, 1944	13,195.00 (bb)	28,665.00 (bb)
	Gain $ 2,590.00 (bbb)	Gain $ 1,225.00 (bbb)
	Value of hog carcasses condemned	
Oct. 31, 1942	$12,060.00 (c)	$ 7,705.00 (c)
Apr. 29, 1944	7,370.00 (cc)	6,030.00 (cc)
	Gain $ 4,690.00 (ccc)	Gain $ 1,675.00 (ccc)
	Value of hog heads condemned	
Oct. 31, 1942	$15,015.00 (d)	$15,015.00 (d)
Apr. 29, 1944	15,860.00 (dd)	13,650.00 (dd)
	Loss $ 845.00 (ddd)	Gain $ 1,365.00 (ddd)
	Value of viscera condemned	
Oct. 31, 1942	$80,850.00 (e)	$79,700.00 (e)
Apr. 29, 1944	56,700.00 (ee)	62,850.00 (ee)
	Gain $24,150.00 (eee)	Gain $16,850.00 (eee)
	Value of viscera passed for cooking	
Oct. 31, 1942	$ 9,350.00 (f)	$18,810.00 (f)
Apr. 29, 1944	10,450.00 (ff)	21,890.00 (ff)
	Loss $ 1,100.00 (fff)	Loss $ 3,080.00 (fff)

Table 4

PLANT 1		PLANT 2	
FIRST EIGHTEEN MONTHS	SECOND EIGHTEEN MONTHS	FIRST EIGHTEEN MONTHS	SECOND EIGHTEEN MONTHS
$ 6,125.00	$ 4,025.00	$ 8,050.00	$ 7,525.00
15,785.00	13,195.00	29,890.00	28,665.00
12,060.00	7,370.00	7,705.00	6,030.00
15,015.00	15,860.00	15,015.00	13,650.00
80,850.00	56,700.00	79,700.00	62,850.00
9,350.00	10,450.00	18,810.00	21,890.00
$139,185.00	$107,600.00	$159,170.00	$140,610.00

Taking the first two digits of the above values to express the fractions referred to previously, we have the following fractions for plants 1 and 2.

Fraction for Plant 1 $\frac{10}{14}$ Fraction for Plant 2 $\frac{14}{16}$

The fraction 10/14 for plant 1 could be taken to mean that only 4 farmers out of 14 (28%) heeded the injunction, "Keep old chickens and hogs apart." This percentage is in agreement with statistics given in table 5, page 14, of Professor H. R. Smith's 1943 Annual Report of the National Livestock Loss Prevention Board, under the heading, "United States Hogs, All Markets," especially if the percentage of condemned and sterilized hogs in 1941 is compared with that in 1943. The percentage of condemned and sterilized hogs in 1943 (0.046) is a 28 per cent improvement over the percentage condemned and sterilized (0.064) in 1941.

The fraction 14/16 for plant 2 could be taken to mean that only two farmers out of 16 (12.5%) heeded the injunction, "Keep old chickens and hogs apart."

It is an interesting fact that in a third state in which a Morrell plant is located the condemnation of tuberculous hog carcasses and their parts has increased during the second eighteen-month period over condemnations during the eighteen-month period immediately preceding it. The state livestock sanitary official states that because of wartime conditions prevailing in that state, he is of the opinion that farmers have lagged in "Keeping old chickens and hogs apart." The states in which plants 1 and 2 are located have been very active in stressing this control measure.

While the actual work of eradicating cattle tuberculosis was under the control of veterinary personnel within the U. S. Bureau of Animal Industry and the various state livestock sanitary agencies, together with that of the veterinary practitioners throughout the United States, nevertheless the groundwork had to be prepared before these agencies could begin to function. Furthermore, the continuation of the program had to be made popular in order that public funds with which to carry on the project might be made available. There were, also, many almost insurmountable prejudices springing up from time to time that threatened to disrupt the whole scheme of cattle-tuberculosis eradication. Professor H. R. Smith has been instrumental, according to popular belief, more than any other single individual, in convincing federal and state law-making bodies that adequate appropriations should be made for this purpose or the magnificent project involving both the public health and the livestock welfare would fail. He traveled extensively and talked forcefully and eloquently, and despite having encountered prejudices that were enough to discourage even the bravest advocates of the plan, he never once faltered. I have often heard it said by those who know that the people of this country owe Professor Smith a great debt of gratitude, that, probably only the well-informed public health agencies and the well-informed livestock disease control agencies are sufficiently informed to adequately appreciate the magnificent leadership and accomplishments of Professor Smith along the lines of tuberculosis eradication.

One of Professor Smith's foremost accomplishments was to sell to meat packers, generally, his theory that if they were to add 10 cents per hundred weight to the purchase price of hogs raised in a county that was a modified accredited area in respect to the cattle-tuberculosis-eradication program, over what they were paying for the same class of hogs raised elsewhere, they would be doing much to further the cattle-tuberculosis-eradication program. There were two reasons which made this plan agreeable to the meat packing industry. *First*, in any county where all the cattle were tested for tuberculosis, the cattle from that county which were affected with tuberculosis would come to them as reactors to the tuberculin test and would be bought subject. Otherwise, all these tuberculous cattle would be bought straight by packers. *Second*, it was then the common belief that hogs affected with tuberculosis were so

only because they had been following tuberculous cattle.

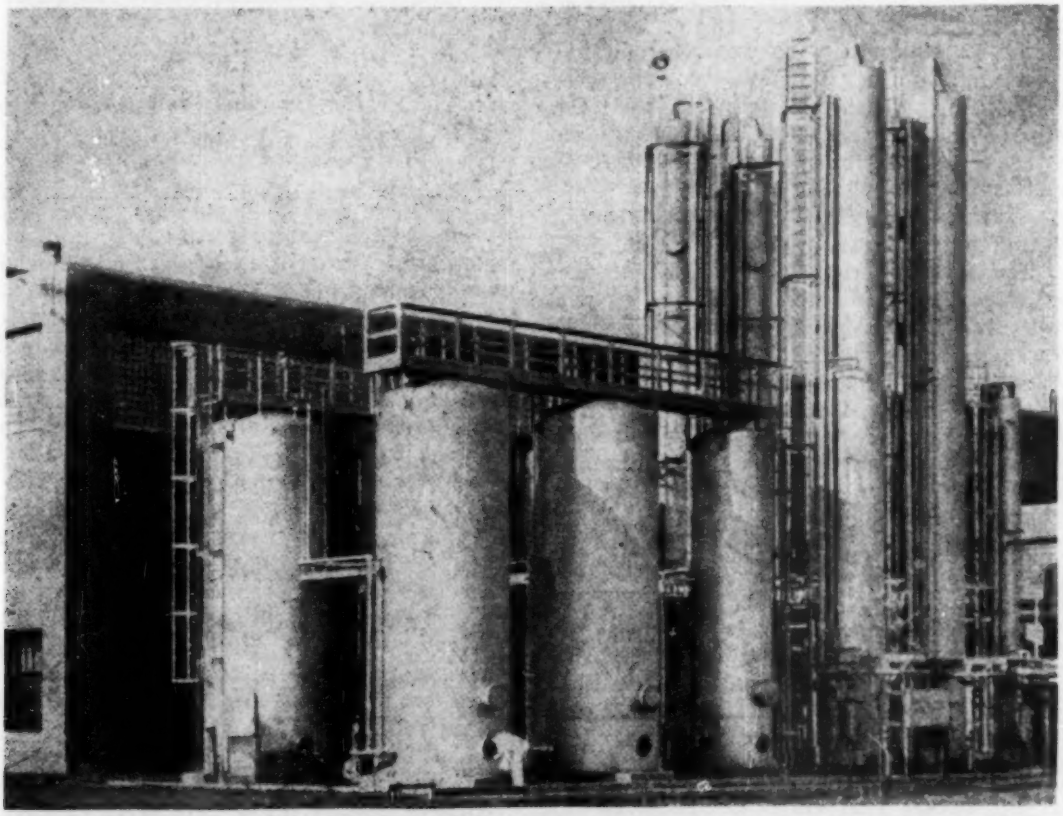
Now that tuberculosis in cattle has been almost completely eliminated, it has become known that when old tuberculous chickens and hogs are allowed to run together, hogs will contract tuberculosis from this association just as they did when they followed tuberculous cattle. It would seem that if a premium were to be paid for hogs coming from counties where (*a*) all tuberculosis in chickens was brought under control by the test-and-slaughter method or (*b*) where no farmers were permitting chickens over 15 months of age to run with hogs, the program of freeing the hog population of tuberculosis would be given a tremendous boost. However, since the meat-packing industry does not deal in chickens as they do in cattle, there is little inducement for this industry to offer a premium on hogs coming from counties where either or both conditions (*a*) *and* (*b*) prevail.

It seems that great national economy would follow if federal and state subsidies were made available for the carrying out of conditions (*a*) and (*b*). The effectual carrying out of (*a*) and (*b*) would result in the following savings:

1) Feed given to tuberculous hogs and chickens would be saved.

2) Hogs that are now being condemned as tuberculous would be fit for food. (The loss due to the condemnation of hogs and their parts on postmortem inspection for tuberculosis was estimated at $4,000,000 in 1943 by the National Livestock Loss Prevention Board.)

3) Farmers would get better returns from their poultry flocks by disposing of them after their first laying year. This means, too, that there would be more eggs and poultry available for public consumption.



An unidentified American, penicillin-production plant pictured in a French veterinary journal in September, 1944, at the time of General Patton's whirlwind campaign against the German legions. It is reproduced here to show that veterinary literature is a living thing, come war, wind, or high water. The picture was taken from Encyclopédie Vétérinaire Périodique—address: 13, rue Puits-Gaillot, Lyon.

Additional Outbreaks of Equine Encephalomyelitis in New Jersey Pheasants

F. R. BEAUDETTE, D.V.M., and C. B. HUDSON, B.S., M.S.
New Brunswick, New Jersey

THE PURPOSE herewith is to bring up to date a report on the cases of equine encephalomyelitis in pheasants diagnosed in New Jersey.

By way of a brief review, the first outbreak of the disease came to our attention on Sept. 16, 1938, from New Monmouth, in Monmouth county. The symptoms displayed by the 4 birds presented suggested avian encephalomyelitis (epidemic tremor), and for that reason brain material was sent to Van Roekel who was studying this disease. He found the virus to be the equine (eastern type) rather than the avian type.[1] Subsequently, several survivors in this flock were shown by us to carry neutralizing antibodies.[2]

In 1939, the disease was diagnosed at Forked River in Ocean county, near Freehold in Monmouth county, and at Sparta in Sussex county.[3] In 1940, a single outbreak was diagnosed near Mays Landing in Atlantic county.[4]

During 1941 and 1942, no outbreaks came to our attention, but on Sept. 29, 1943, 3 female pheasants were received from New Gretna in Burlington county. A small quantity of brain material was removed aseptically, by means of a capillary pipette, from each bird and deposited in a sterile tube. This material was frozen until October 6, when it was suspended in about 1 cc. of broth. The coarse particles were allowed to sediment, and three 11-day-old embryonated eggs were inoculated, (each with 0.2 cc.), with each of the three brain suspensions. The three eggs inoculated with one sample hatched, but the embryos inoculated with the other two lots died. In the one case, two embryos were dead within twenty-four hours, and the third within thirty-six hours. In the other case, the three embryos died within twenty-four, thirty-six, and sixty hours, respectively. On harvest, the embryos were dark red and the yolk vessels injected. Cultures taken on agar plates showed the absence of growth. Serosa and liver of the embryo were combined from some of the eggs and held at about –20 C. They will be referred to again.

About a year later, on Oct. 16, 1944, 2 pheasants (male and female) were received from the same farm with the history that they had the same disease as in the previous year. Since the birds were dead, no symptoms were observed. Brain material was removed, as already described, and frozen till October 24, when one sample was suspended in broth and inoculated into each of four 12-day-old embryonated eggs, in a dose of 0.25 cc. All the embryos were dead within twenty-four hours and on harvest presented the usual appearance and were sterile as determined by cultures on agar. This case is of special interest for the reason that it represents the first time that we have definitely established the disease on the same premise in successive or subsequent years. However, in two other instances (Forked River and Freehold) the history indicated that the disease existed on the farm the year just previous to its definite diagnosis.

TABLE I—Incidence of Equine Encephalomyelitis in Horses and Pheasants in New Jersey Between 1938 and 1944

	HORSES	PHEASANTS
1938	13[5]	1
1939	35[6]	3
1940	0[7]	1
1941	0[8]	0
1942	0[9]	0
1943	0[10]	1
1944	1[11]	2

The farm at New Gretna was visited Oct. 31, 1944, in order to get a more complete history. The caretaker, who had been on the place from the beginning, stated that pheasants were first reared there in 1939, from a pair of breeders ob-

Journal series paper of the New Jersey Agricultural Experiment Station, Department of Poultry Husbandry, Rutgers University, New Brunswick, N. J.

tained in New York. Other stock was acquired in the form of hatching eggs. However, 25 males were obtained from Forked River in 1942 and were not sold or liberated until October, 1943. Hence, birds from a farm where the disease had been diagnosed in 1939 were present prior to the beginning of the outbreak in 1943. This is of interest because, as we have already pointed out,[3] the outbreak at Sparta was preceded by a temporary introduction of birds from Forked River. The outbreak at Forked River in 1939 was said to have stopped before pheasant were transferred to Sparta (not in an enzoötic area) later that year. This would suggest a carrier state in some of the Forked River birds in 1939 but would hardly account for the transfer of infection to New Gretna in 1943, because a caretaker at Forked River claimed in October, 1944, that there had been no recurrence of the disease of 1939. However, since some losses occur every year and since no birds were examined, the disease may have existed to some extent every year. In any event, New Gretna is in an enzoötic area, and there may be no connection between the outbreak and the introduction of birds in 1942 from a farm that had the disease in 1939.

The farm was made up of a large pen for breeders. Attached to this on one side was an enclosure in which there were ten small runs for brooding. The end of the breeder pen was joined to a holding pen along the side of which was a house. On the other side of the house there were five runs.

In 1943, the disease began about September 15, in the holding pen, containing about 500 birds. There were also about 1,000 birds in the five runs, and in this population of 1,500 birds about 500 died. The outbreak ended about October 15. Breeders in the pen adjoining the holding pen were never affected.

In 1944, the disease began in 350 birds in the holding pen, and 120 had died by October 31, only 3 having died in the previous two weeks. But not all the losses were confined to birds in the holding pen. The hurricane on September 14 blew down doors enabling these birds to mingle with two pens of 200 birds each. Thereafter, some of these died. No birds died in the remaining three pens until October 31, when 1 bird was lost in the pen most distant from the two mentioned above

On Nov. 22, 1944, two males were received with the history that about a week previously, losses began in the pen in which 1 had died on October 31. One bird was thin, walked unsteadily, and finally came to rest on its side. The other bird was in good flesh but was lame. The birds were bled from the heart and then examined *post mortem*. At that time, brain samples were collected. Serum was removed from the blood samples and frozen, as was the brain tissue. On November 27, each brain sample was suspended in about 1 cc. of broth and each of four eggs were inoculated with each sample in a dose of 0.1 cc. Likewise, on December 11, each serum sample was inoculated into three eggs, in a dose of 0.2 cc. In all cases, the results were negative. Therefore, these birds either did not have encephalomyelitis or else had recovered.

The caretaker said that mosquitoes were not abundant in 1944 but that wood ticks were always plentiful. He also estimated that there had been at least six frosts by Oct. 31, 1944.

In other outbreaks, we have frequently found gapeworms (*Syngamus trachea*) in infected pheasants, but none was found in the 7 birds from this farm examined in 1943 and 1944.

Since egg material harvested Oct. 8, 1943, was available, it was thought of interest to test its activity after holding over a year in a frozen state. Accordingly, the serosa and liver from one egg were ground in about 5 cc. of broth and centrifuged. On Nov. 2, 1944, this material was inoculated into each of five 10-day-old eggs, in a dose of 0.2 cc. All embryos were dead within twenty-four hours. Thus the virus retained its activity after having been held 391 days in a frozen state.

The second outbreak in 1944, came to our attention on August 21. Two birds came from Deans in Middlesex county. Both were unable to walk and showed nervous symptoms. One was thin and the other in fair flesh and both had a diarrhea. Nothing was observed on autopsy except a few cecal worms *(Heterakis gallinae)* in 1 bird. Brain material was removed and frozen until the following day when it was suspended and one sample inoculated into

three eggs and the other into four eggs, in a dose of 0.2 cc. Apparently, the latter was contaminated during collection, because three eggs died within forty-eight hours and yielded a contaminant on culture. As the fourth egg hatched, evidently no virus was present. However, the other sample killed the three embryos within twenty-four hours. The liver and serosa from one egg were frozen for twelve days, suspended in 5 cc. of broth, and reinoculated into five 11-day-old eggs, all of which were dead within twenty-four hours. On harvest, the usual changes were seen and cultures made of agar plates from each egg showed no growth.

The farm was visited September 11, at which time 7 to 8 birds were still dying each day. The flock consisted of about 1,700 of various ages, but 180 breeders and the very young birds were spared. The loss to date had been about 150 birds. The first symptom noticed was a paralysis of the legs; this was usually followed by death in about two days. Some birds recovered slowly. The owner insisted that there had been no introduction of birds from the outside.

The interesting feature of this outbreak is that it occurred in an area in which the disease is not enzoötic in horses. The only other similar case in our experience is the outbreak at Sparta, but in that instance, as already mentioned, birds had been introduced from a farm where the disease had been diagnosed.

Numerous sparrows were noticed in the tall growth in the pheasant runs, and the owner mentioned that occasionally paralyzed sparrows were observed. He was accordingly requested to bring some in for examination. Such a bird was presented September 12. Brain material was removed and frozen until it was suspended, and inoculated into each of five 11-day-old embryonated eggs on September 23. The results were negative. No more birds were brought in for examination.

A comparison of the number of reported cases of equine encephalomyelitis in horses with the number diagnosed in pheasants since the first case in 1938 is shown in table 1. It will be seen that during two years, namely, 1940 and 1943, the disease was diagnosed in pheasants with no reported cases in horses. Moreover, in 1944, there were two cases in pheasants and only 1 case in horses.

References

[1]Van Roekel, H., and Clarke, M. K.: Equine Encephalomyelitis Virus (eastern type) Isolated from Ring-Necked Pheasants, J.A.V.M.A., *94*, (1939): 466-468.

[2]Beaudette, F. R.: Neutralization Tests with the Sera of Pheasants Surviving an Outbreak of Equine Encephalomyelitis. Third International Congress of Microbiology, (Sept. 2-9, 1939): 93.

[3]Beaudette, F. R.: Equine Encephalomyelitis in Avian Hosts. Proc. Forty Third Meeting of the U. S. Livestock Sanitary A. Dec. 6-8, 1939, (1940): 185-201.

[4]Beaudette, F. R., Black, J. J., and Hudson, C. B.: Another Case of Equine Encephalomyelitis in New Jersey Pheasants, J.A.V.M.A., *98*, (1941): 499-450.

[5]Mohler, J. R.: Report on the 1938 Outbreak of Infectious Equine Encephalomyelitis in the United States. U.S.D.A., B.A.I., (Feb. 15, 1939): 4.

[6]Mohler, J. R.: Report on Infectious Equine Encephalomyelitis in the United States in 1939. U.S.D.A., B.A.I., (Jan. 20, 1940): 4.

[7]*Ibid.*: 1940, (April 1, 1941): 4.

[8]*Ibid.*: 1941, (April 30, 1942): 8.

[9]*Ibid.*: 1942, (March 1, 1943): 8.

[10]Miller, A. W.: Report on Infectious Equine Encephalomyelitis in the United States in 1943. U.S.D.A., B.A.I., (May 15, 1944): 4.

[11]Hendershott, R. A.: Personal communication.

Section on Comparative Medicine

The Section on Comparative Medicine, Royal Society of Medicine (Britain), examined as to the ground covered by its programs, brings to mind the absence of that branch of medicine in the society work of this country. The maladies discussed, usually microbial or parasitic, seem to fill a long-neglected gap to mutual advantage. There is a group of diseases whose comparative endemiology, ecology, semiology, immunology, and mortality appear to be quite as important to the physician as to the veterinarian and *vice versa*. Perhaps, in the not too distant future it may not be too much to hope that attention will be given to the founding of such a section in this country. In a current meeting of the Royal society, for example, the rickettsial diseases interchangeable between man and animals (murine typhus fever, dog-tick typhus, heartwater of ruminants, scrub typhus of the Far East, Nigerian dog disease, bovine infectious kerato-conjunctivitis) were shown to be of common and timely interest. Turning to the report of another meeting (February, 1945), milk hygiene was the subject of a long article and lively discussions. In short, the technical problems of common concern to veterinary and to human medicine are numerous.

Veterinary Activities with Animals at a Port of Embarkation

CAPTAIN LEO A. WUORI, V.C., A.U.S.
San Francisco, California

ANIMAL PORTAGE and animal drawn equipment do not occupy the prominent place they held in World War I and previous military conflicts. The passing of animal transportation has been accompanied by a steady decline in the number of officers and men who understand animals and are capable of handling them.

The fact remains, however, that there are still many objectives to be accomplished and much terrain to be traversed which necessitate the employment of the horse or mule. This is true, despite the presence of trucks, tractors, and jeeps. When the clouds of this war began to appear, it became the task of a relatively small group of experienced officers, many of them veterinarians, to form our animal transportation program and place it in operation. The nucleus of the organization stemmed from the army officers who had many years of experience with army mounts and mules. Many of them had served in this capacity in the first world war. Such a man is Col. George J. Rife, V.C., who is stationed at the San Francisco Port of Embarkation of the Army Transportation Corps as port veterinarian.

Inasmuch as millions of pounds of meat and dairy foods are inspected by the port veterinarian and his organization each week, and numerous ships are inspected daily for food storage facilities and mess sanitation, animal shipments destined for overseas areas would appear to be a small part of a big task. Small in relation to other veterinary activities at the port though they may be, proper shipment and processing of animals remains of utmost importance.

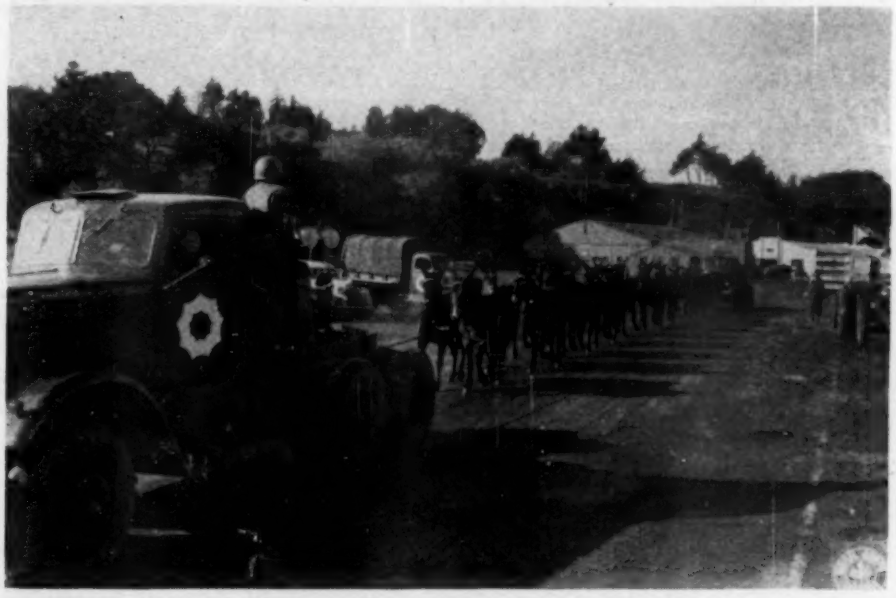


Fig. 1—This is the floating picket line by which the port veterinarian's office at San Francisco Port of Embarkation, Transportation Corps, moves mules from the port animal depot to the pier for loading on the overseas-bound animal transport.

When the port veterinarian receives notice of a forthcoming animal shipment, he immediately goes into action with extensive plans for the procedure. By the time the animals arrive everything is in readiness. Lost motion, wasted effort, and de-

Fig. 2—Truck box used for transporting slightly-injured mules from staging depot to pier at the Transportation Corps' San Francisco Port of Embarkation.

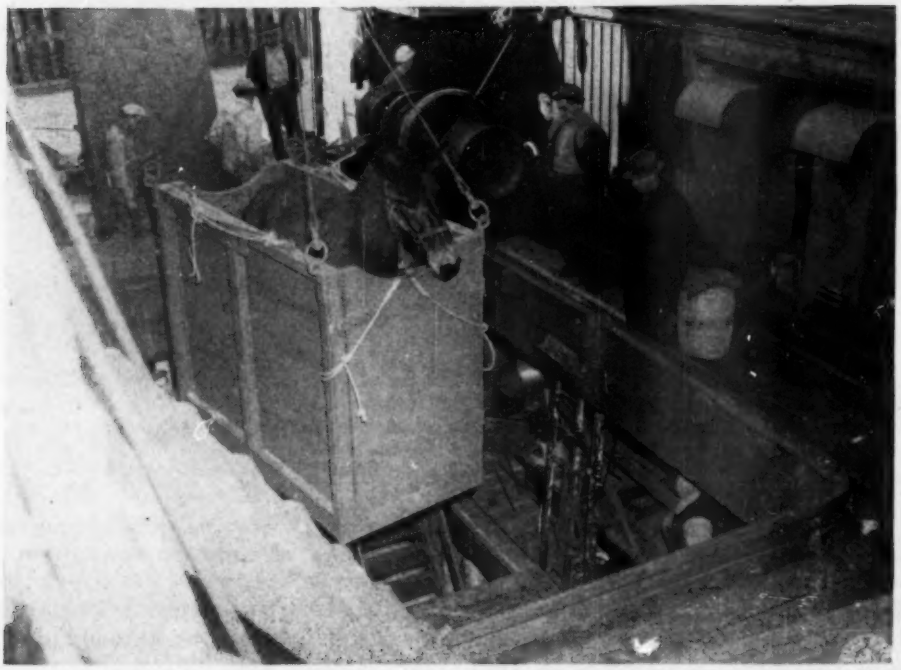


Fig. 3—In some loadings at San Francisco Port of Embarkation, Army Transportation Corps, the flying stall is used to get mules aboard the animal ship taking them overseas.

lay are flaws that careful planning and experience have ironed out of this smoothly running machine.

When mule shipments arrive at this port by rail, they are unloaded from the cars into a well-built corral. They are then removed to the port animal depot, about a mile from the railroad. This is accomplished by leading the mules in groups of about 80 head with the bell mare.

Immediately upon arrival at the port animal depot, the animals are started on a rigid staging process that is a three-week, day and night job for the veterinarian and his personnel. This port insists on a three-week processing period whenever military conditions permit, in order that any possible contagion will appear on shore, rather than on board ship at sea.

Each animal is thoroughly examined for injuries or disorders that might have occurred in transit to the port, and proper treatment is instituted. At the same time, animals that are thin or in poor general condition are segregated and given specially prepared diets. Since long sea voyages through the tropics entail much loss of weight for horses and mules, past experiences have proved the necessity of sending animals overseas in top condition with even an excess of flesh. All of the animals, even those arriving in good flesh, make remarkable weight gains on the diet prescribed by the port veterinarian.

The feet of all animals are trimmed and cared for by qualified enlisted personnel under the supervision of the veterinary officers.

Experience again dictates that all animals be clipped prior to embarkation, since the clipped horse or mule can withstand more easily the extreme heat and rigors of travel to or through a tropical climate. Veterinary officers are in attendance even at this relatively simple operation while it proceeds night and day.

All horses and mules are mallein tested and kept in rigid quarantine while at the port.

Supervision during these routine procedures serves a second important purpose in that it brings each animal under the scrutiny of a veterinary officer not once but many times. The usual injuries and diseases are encountered and given proper treatment. Particular attention is paid to any animal that might prove unserviceable. This last of many filtrations insures that only perfectly sound animals are sent overseas where the ability of one animal to deliver its full measure of usefulness can be the straw that tips the balance in favor of

Fig. 4—A loading ramp is the more common method of loading mules at San Francisco Port of Embarkation, Transportation Corps. The mules sometimes need a little urging to mount the ramp.

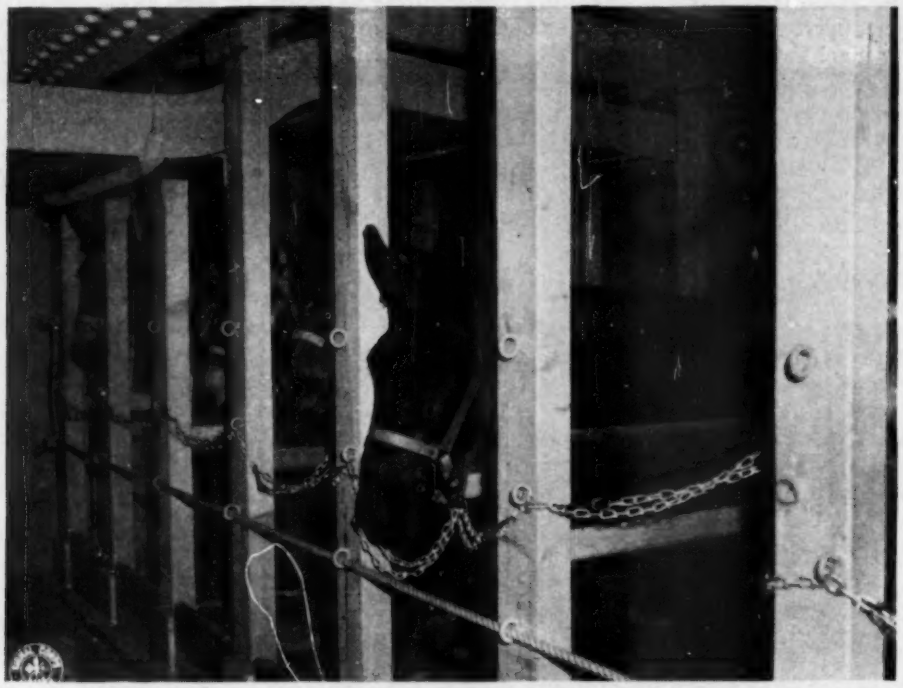


Fig. 5—Mules loaded and ready for voyage at San Francisco Port of Embarkation, Transportation Corps. The chains are removed as soon as all animals are aboard. Ventilation pipes may be seen at the top of the picture.

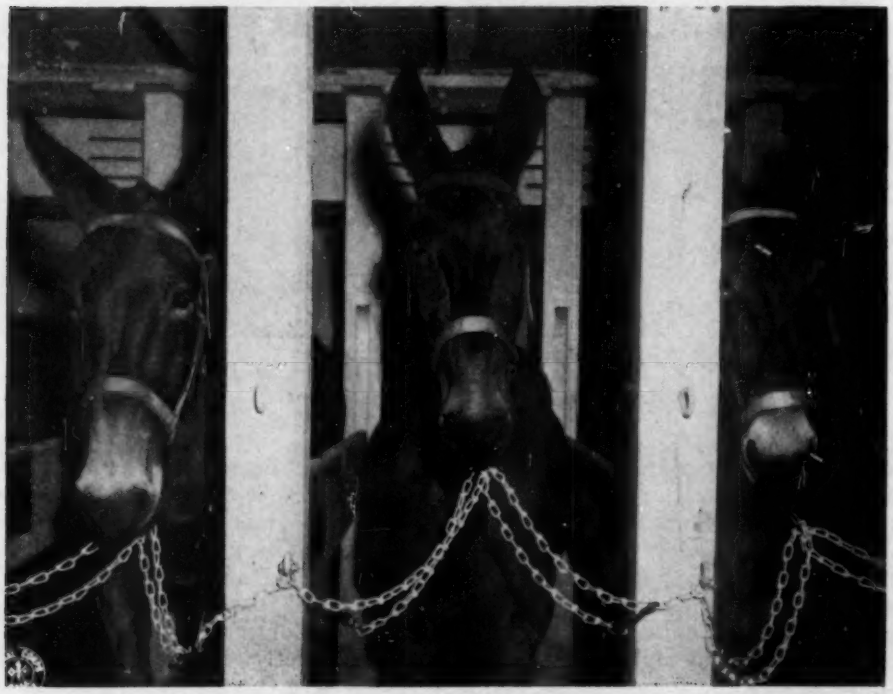


Fig. 6—Ready for a long ride are these mules loaded on an animal ship at the San Francisco Port of Embarkation, Transportation Corps. The metal trim on boards between stalls is intended to prevent the animals from chewing away the lumber.

a successful mission. Using these methods, this port has established a remarkable record for efficiency and the safe water transportation of animals.

When loading time arrives, officers and enlisted personnel, trained and thoroughly briefed in their duties, are stationed in strategic key positions along the route the animals will travel to the ship. The picture of the mules on the floating picket line is self-explanatory. It is by this method that the mules and horses are moved from the animal depot to the army piers for loading aboard the animal transport. The picture showing the mules being unloaded from the motor van depicts the method used for transporting animals with slight lameness or minor injuries to the ship from the corrals. Only such cases of injuries as will respond to treatment promptly, in a matter of days, are allowed to leave the port. Both ramp and flying stall methods of loading have been used at the San Francisco port. The ramp has proved superior when loading conditions permit its use. The picture showing the mule being maneuvered onto the ramp by "persuasion" from a couple of our enlisted men, illustrates plainly that a strong back and much "mule sense" are necessary for this job.

Freighters are converted into animal transport vessels according to the recommendations of the port veterinarian. He studies the blue prints for the conversion before any work is started. Any alterations in the plans which the port veterinarian deems necessary in order to insure the comfort and safety of the animals and to provide additional sanitation enroute are made at this time. He also makes frequent inspections of the ship while the work is in progress. Large shipments require large ships with stalls built on three decks. Smaller shipments may require only the use of the top two decks. An attempt is made to place as many stalls as possible on the top side, as the piped-in ventilation below deck is never equal to the fresh air above. Limited space is reserved for exercising the animals while at sea. Additional stall space is constructed for the isolation and care of sick cases developing at sea.

When the animals are all aboard ship, the transport veterinarian is rendered what aid and advice seems applicable in planning his program for the trip. He is briefed as to all of the facilities and supplies which have been placed aboard the ship at his specific disposal.

Once loaded and on their way, the animals become the charge of the transport veterinarian. They leave a tired but relieved group of port veterinary officers and enlisted personnel standing on the pier waving farewell as the ship pulls out into the bay. There is a touch of sadness in the air. These veterinarians, quite in character, enjoy the rôle of "animal practitioner."

Rabies Prevention Among Veterinarians

Notes and Queries (*J. Am. M. A.*, Sept. 28, 1945) answers a physician's query on how to handle a neurosis in a veterinarian due to five series of prophylactic rabies treatments in the last two years The symptoms given are muscular weakness of the legs and a hyperesthesia at the level of the twelfth dorsal vertebra.

The answer was to avoid any more rabies-vaccine treatments and to rely upon *painstaking general measures.* The advice (italics ours) is as complimentary to the giver as it is complementary to any veterinarian's budget of caution. A practitioner and teacher of long experience—Dr. M. H. McKillip—indicated surgical awkwardness as the main cause of personal injuries acquired in the line of duty. Unkind as that may seem in the presence of a suffering colleague, it rings true. Skill in the prevention of personal catastrophe is a chapter of animal surgery that should not be dismissed with a gesture. By that token, the best *painstaking general measure* would be to quit getting oneself inoculated with canine saliva, just as one keeps from getting kicked to Kingdom Come by a mule.

Human-Porcine Influenza Relationship

M. Dreguss signalizes (*Arch. f. Ges. Virusforsch., 3,* (1943): 35) an epizoötic of swine influenza in Hungary in which the symptomatology was analogous to the disease in the United States. While the virus was not isolated, the serum of the convalescent hogs neutralized the virus of human influenza, but human virus did not neutralize the porcine strain of Shope. During World War I, Koen expressed the opinion that the human being was the reservoir of the porcine influenza virus or *vice versa.*

SURGERY & OBSTETRICS

AND PROBLEMS OF BREEDING

Data Concerning Foals of Peruvian Remount Service

COL. RUSSELL McNELLIS, V.C., U.S.A.
Lima, Peru

ALMOST two years ago, it became possible to start a remount breeding farm for the Remount Service of the Peruvian Army under the supervision of Col. Thos. J. Johnson, former chief of the U. S. Remount Service, and until recently, chief of the U. S. Military Mission to Peru, and the author. Because most of the civilian breeders were not acquainted with proper breeding methods and because officers of the Remount Service had had no practical experience, it was decided that a remount breeding farm was essential to our remount program in Peru for the following reasons:

1) To demonstrate proper breeding methods to the civilian breeder.
2) To teach proper remount procedure in breeding, training, and issue to remount officers.
3) To produce horses and mules for the Peruvian Army.

We were able to start the farm on an area of about 120 acres of land, fertile but requiring irrigating and planting. The whole area was fenced with adobe walls. A stallion stable was constructed, and a training area and stable with a capacity of 200 remounts established. The area was divided into 19 small pastures for the mares and foals, but no stables were required for them as the climate is very mild and rains are unknown in this area. The pastures were seeded to alfalfa and grammalote. In addition to this pasture, the animals were fed a supplementary ration of barley and some dry alfalfa.

No funds were available for the purchase of brood mares; however, numerous Thor-

Contribution from U. S. Military Mission to Peru. Approved for publication by the War Department.

TABLE I—Weights, Measurements, and Gestation Periods for Purebred and Half-Bred Foals in Peru

Sire	Dam					Foal						
							Weight at Birth					
	Identification No.	Country of Origin	Age	Breeding	No. times foaled previously	Sex	Kilos	Pounds	Height in cm.	Girth in cm.	Bone in cm.	Period of Gestation
Marco Antonio: Thoroughbred (R017); Foaled 1926 in Chile; Color, Chestnut; Ht., 1.59 cm.; Sire, Tacite; Dam, Munda.	X025	Arg.	13	½ TB	1	C	47	103.4	101	79	12	340
	X027	Chile	14	Unk.	1	C	52	114.0	100	85	13	341
	X436	Arg.	7	Unk.	0	C	40	88.0	92	78	12	337
	X671	Peru	11	Unk.	1	F	53	116.6	102	86	13	343
	X673	Arg.	11	½ TB	0	C	45	99.0	101	72	12	336
	X003	Peru	5	Unk.	2	F	36	79.2	89	75	11	338
	X020	Chile	19	Unk	2	C	45	99.0	96	97	11	352
	X304	Peru	14	Unk.	0	C	42	92.4	90	77	12	333
	X0259	Chile	15	Unk.	1	C	44	96.8	94	79	12	340
	X255	Peru	10	½ TB	0	C	43	94.6	92	76	12	336
	X668	Arg.	14	Unk.	0	F	35	77.0	88	76	12	325
	R102	Arg.	8	Unk.	1	F	49	107.8	99	85	13	335
	X940	Peru	12	½ TB	0	F	33	72.6	88	75	11½	325
	X681	Peru	11	TB	0	F	41	90.2	92	84	12	330
	X113	Peru	12	TB	0	C	30	66.0	85	79	10	350
	X661	Chile	12	½ TB	0	C	36	79.2	87	74	11	329

TABLE I—(Continued) Weights, Measurements, and Gestation Periods for Purebred and Half-Bred Foals in Peru

SIRE	DAM					FOAL						
							WEIGHT AT BIRTH					
	IDENTIFICATION NO.	COUNTRY OF ORIGIN	AGE	BREEDING	NO. TIMES FOALED PREVIOUSLY	SEX	KILOS	POUNDS	HEIGHT IN CM.	GIRTH IN CM.	BONE IN CM.	PERIOD OF GESTATION
Bayardo: Thoroughbred (R023); Foaled 1938 in Arg.; Color, Bay; Ht. 1.61 cm.; Sire, Morador II; Dam, Luciana.	X705	Arg.	8	Unk.	0	F	45	99.0	90	82	12	388
	R103	Peru	14	TB	0	C	33	72.6	94	80	10½	355
	X0078	Arg.	8	½ Per	0	C	52	114.0	96	81	12	333
	X102	Arg.	15	Unk.	1	C	59	130.8	103	86	13	347
	X006	Peru	4	Unk.	0	C	43	94.6	95	74	12	338
	X356	Chile	14	Unk.	0	F	33	72.6	86	70	10	338
	X021	Chile	17	Unk.	1	C	40	88.0	93	76	12	338
	X004	Peru	5	Unk.	2	F	38	83.6	89	70	11	337
	X401	Chile	13	Unk.	0	F	34	74.8	89	69	11	331
	X0265	Arg.	9	Unk.	0	F	44	96.8	96	76	11½	342
	X254	Arg.	8	Unk.	0	F	34	74.8	90	70	11	340
Necresco: Thoroughbred (R019); Foaled 1932 in Peru; Color, Bay; Ht., 1.62 cm.; Sire, Simplon; Dam, Charmeuse.	X024	Chile	12	Unk.	1	F	61	134.2	104	87	13	334
	X669	Chile	11	½ TB	0	F	38	83.6	94	79	12	342
	X0121	Arg.	8	½ Per	0	F	59	130.8	105	89	14	343
	X095	Arg.	9	½ Per	1	F	50	110.0	100	88	13	353
	X023	Arg.	14	½ TB	2	C	47	103.4	98	78	13	346
	X431	Chile	13	Unk.	0	F	40	88.0	92	78	11½	341
Chapete: Thoroughbred (R024); Foaled 1937 in Peru; Color, Bay; Ht., 1.57 cm.; Sire, Simplon; Dam, Diana II.	X0229	Arg.	21	Unk.	0	C	37	81.4	87	76	11	332
	X758	Chile	11	Unk.	1	F	47	103.4	96	82	13	346
	X327	Arg.	8	½ Per	0	F	45	99.0	90	81	12	327
	X841	Arg.	11	Unk.	0	F	43	94.6	95	80	12	329
	X670	Chile	10	½ TB	0	C	30	66.0	81	68	11	307
	X572	Arg.	10	Unk.	0	F	40	88.0	90	79	12	325
Peru: Quarterhorse (R016); Foaled 1941 at King Ranch, USA; Color, Dark Chestnut; Ht., 1.55; Sire, Ranchero; Dam, Cecili.	X193	Arg.	8	Unk.	0	C	59	130.8	101	87	14	327
Fibrol: Thoroughbred (R025); Foaled 1938 in Peru; Color, Chestnut; Ht., 1.60 cm.; Sire, Arenal; Dam, La Nata.	X0323	Chile	9	Unk.	0	F	42	92.4	88	80	12	323
	X676	Arg.	13	TB	0	F	30	66.0	83	72	11	323
	X458	Peru	7	Unk.	1	C	47	103.4	92	80	12	331
	X225	Peru	10	½ TB	0	F	40	88.0	94	78	11	344
	X395	Arg.	10	Unk.	0	C	47	103.4	85	80	11	345
	X516	Arg.	11	Unk.	0	F	38	83.6	90	76	12	337
	X234	Peru	11	Unk	0	C	34	74.8	85	71	10	342
Noche Alegre: Thoroughbred (R027); Foaled 1940 in Peru.	X011	Peru	4	Unk.	0	C	47	103.4	96	77	12	340
Strongboy: Thoroughbred (R031); Foaled 1937 in Argentina; Color Bay; Ht., 1.60 cm.; Sire, Cinchon; Dam, Regenta.	X735	Arg.	9	Unk.	0	C	53	116.6	95	84	13	314
	X099	Peru	7	Unk.	1	C	48	105.6	94	80	12	339
	X596	Arg.	9	Unk.	0	C	48	105.6	92	83	13	324
	X0005	Chile	18	Unk.	0	C	33	72.6	90	72	12	331
Manco Capac.*	X022	Chile	15	Unk.	0	C	44	96.8	95	82	11½	339
Unk.	OT92	Peru	3	½ CP	0	F	31	68.2	80	70	10	Unk.
Unk.	X904	Peru	15	½ TB	0	F	42	92.4	95	79	12	Unk.
AVERAGE			10.9				42.7	93.9	92.8	78.6	11.8	337

*Breeding unknown, not TB; ½ Arg. = ½ Argentina; ½ TB = half-bred; Unk. = unknown; TB = Thoroughbred; ½ Per. = ½ Percheron; QH = Quarterhorse; CP = Caballo de Paso (the Peruvian national horse); Prob. = probably; C = colt; F = filly. Measurements are in the metric system and 1 cm. equals .3937 in.

oughbred stallions were available at the local racetrack, and these were purchased at prices ranging from $160 to $320. Usually 6 stallions were maintained at the farm, and as soon as a young one was properly trained, he was issued to a civilian breeder. At present, we have about 30 stallions and 5 jacks with civilian breeders. Only two, "Marco Antonio" and "Strongboy," are permanent residents of the remount breeding farm stable.

As mares could not be purchased, it was decided that the only way to obtain them was to procure them from the nearby army regiments. These mares were of all types and ages, mostly from Argentina and Chile. A "teaser" was sent to each regiment three times a week in a trailer and all selected mares were teased. Any mare found to be in heat was sent to the remount breeding farm the following morning and was bred to a remount stallion. Those mares that did not return for service for three months were then examined either *per rectum* or by the rat test, and those found to be in foal were then transferred to the remount breeding farm as brood mares. Although the number of mares in regiments in the Lima area was limited, by the above procedure, we were able to obtain 110 mares in foal. To date, 55 or one half of these have foaled and all foals are living.

It is thought that table 1, regarding the weights, measurements, and periods of gestation for purebred and half-bred foals in Peru, might be of interest to breeders.

Sex Control in Dogs

A system of vaginal douching to influence the sex of the puppies produced is discussed in "Dog Research Progress." By the use of a 3 per cent lactic acid douche, the number of female offspring was increased, while the use of a 3 per cent sodium bicarbonate douche produced a predominance of male puppies.

Obliteration of Anal Glands

A method of achieving this end without resort to surgery is reported in *Veterinary Record* (Aug. 11, 1945). A solution, composed of ferric chloride 1 dram, glacial acetic acid 1 cc., absolute alcohol 6 cc., and chloroform 3 cc., is injected from a glass syringe through an all-silver cannula after the anal sphincter has been relaxed, with pentothal sodium injection to produce general anesthesia.

Plasma Substitute

A new preparation that is a substitute for blood in the treatment of shock has been developed by Professor Modestov, of the Molotov Special Institute. A dispatch from the Tass agency states that the base is a mineral water, and that the chemical composition closely resembles that of blood plasma. It can be kept in ampule form for years and is cheaper than blood citrates.

A New Use for Cocaine

Cocaine overcomes the prolonged hypnosis of intravenous chloral anesthesia. Says a rumor, "A subcutaneous injection of 4.5 gr. of cocaine hydrochloride brings the anesthetized horse to his feet in a jiffy."

Cocaine is a quick-acting cerebral stimulant of considerable duration in the horse, so markedly so that a "cocained" horse cannot be anesthetized with safe amounts of chloroform. Surgeons of the horse-and-buggy days frequently had that experience in attempting to chloroform horses after using cocaine to diagnose lameness. In 1887, Mossy (quoted by Sollmann), in studying the pharmacodynamics of cocaine, demonstrated that 10 to 40 mg. of cocaine wakened dogs he had narcotized with chloral. Its use in horse surgery is, therefore, logical.

The principal objection to chloral anesthesia in horses is the long duration of the postoperative hypnosis. Where there are a number of operations to perform in succession with only one outfit, or in a small arena, chloral has to be ruled out on account of the long revival time, and in on-the-farm work, time is wasted in getting the patient upright and smug before driving on to the next stop.

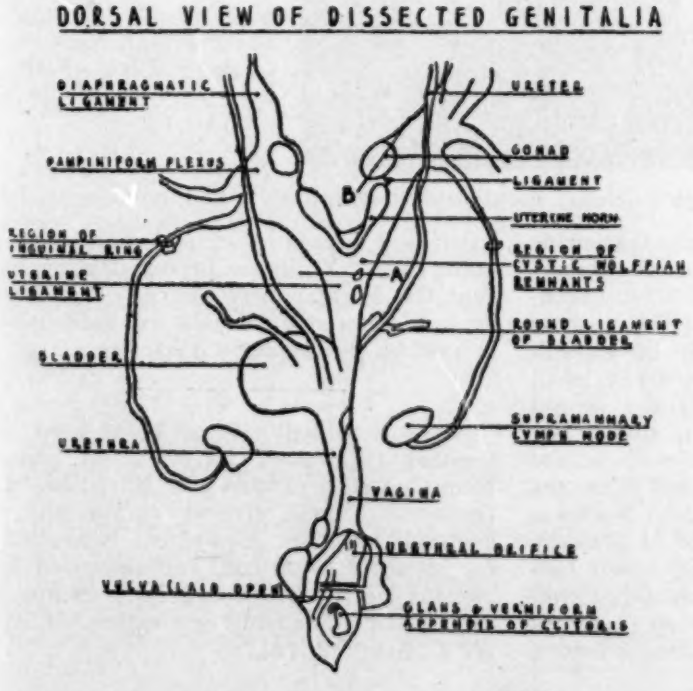
To operate skilfully is not sufficient for the aims of surgery, says Dr. James Farquharson (*North Am. Vet.*, Oct. 1945), because the objects of surgery are to relieve pain, restore function, and save life.

A Case of Intersexuality (Hermaphrodism) in a Horned Goat

Intersexuality is known to be the major cause of absolute sterility in certain breeds of goats. Asdell has suggested a close linkage between the gene for hornlessness and the gene for intersexuality. The following case is reported, not only as evidence of a horned hermaphrodite, but also in the hope that the detailed findings given may be of assistance to those engaged in research on this problem.

The external genitalia were feminine in character; the internal genitalia are shown. The kidneys and ureters were normal; the urethra was large and more muscular than the normal female urethra. The vagina ended blindly 6 cm. cranial to the urethral opening. A uterine body and cervix were absent. A peritoneal membrane (presumably representing the broad ligament and designated here as the uterine ligament) connected the end of the blind vagina to the bifurcation of the uterine horns. The uterine ligament enclosed cystic bodies, lined with transitional epithelium, and remnants of ducts lined with cuboidal epithelium. The two uterine horns formed a U-shaped organ suspended laterally by the cranial end of the uterine ligament and

Dorsal view of dissected genitalia.



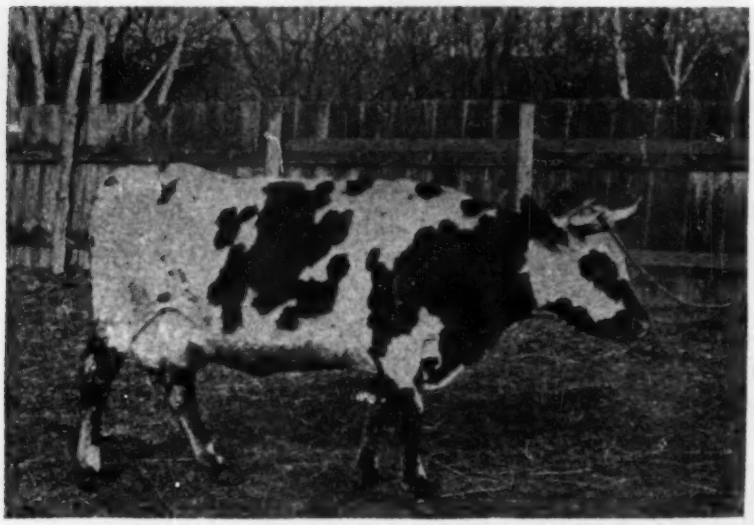
Outline drawing of figure 1, showing location of organs.

medially by a single intercornuate ligament; cranially they were united on either side of the gonad by a short ligament corresponding in position with the ovarian ligament. No Fallopian tubes were present. Thus the uterine horns, which showed typical uterine histology, were blind at both extremities.

The gonads were suspended in the sublumbar region, the diaphragmatic ligaments being well developed. Each was an oval body consisting largely of testicular tissue. The seminiferous tubules were lined by a single layer of cuboidal cells containing large vacuoles, the whole resembling a picture of hydropic degeneration. Areas of rete testis and epididymis were also present, but no ovarian tissue was demonstrable. No sperm were present.—*From Vet. J., July, 1945.*

Norman Cattle

When the American GI's pressed into Normandy from Cherbourg on D-Day, they were astonished at the fine cattle they found grazing on the lush pastures of that region, the famous Contentine, all-purpose breed, generally called Norman, that made northern France renowned for Camembert cheese and Isigny butter and other delicacies of the Parisian gourmet. The Norman cow will average around 6,000 lb. of milk per annum and fattens up to 1,800 lb. when superannuated. Steers attain the weight of over a ton. The origin of this triple-purpose cattle (milk, beef, yoke) is lost in the Middle Ages far beyond William the Conqueror (11th century, A.D.). Normans are said to be the oldest breed of domestic cows. The score: short legs, broad buttocks, thick skin, big milk veins, large symmetrical udders, color mapped (various shades of red and brindle); heavy eaters, hardy, disease-resistant; net weight of dressed carcass lower than the beef breeds. Attempts to introduce Norman cattle into this country in the nineteenth century were not successful owing to the trend toward specialized breeds—beef and dairy almost exclusively. Vigilance in registration has kept the Norman breed pure. The *Herdbook d'Isigny et du Bessin* was established in 1883 by the *Société d'Agriculture.*



Purebred Norman cow, "Annie", one of the early cows registered in the Herdbook d'Isigny et du Bessin.

—*American Veterinary Review, April-May, 1895*

Aerosol penicillin has been used in treating respiratory infections in human beings. A concentrated mist introduces the therapeutic agent directly at the site of bacterial invasion. Equipment is available for as little as $10.00, and improved apparatus has a valve that permits escape of the aerosol only during inspiration.—*J. Am. M. A., Sept. 22, 1945.*

CLINICAL DATA

Clinical Notes

When urticaria fails to respond to the usual treatments, it sometimes yields when vitamin K is administered.

Dogs may become toxic following the use of DDT, especially if an oily solution is used. If so, it is likely to be accompanied by hypocalcemia and will respond to calcium gluconate.

Swayback in lambs may be corrected by increasing the copper intake, but copperized licks were less satisfactory than biweekly dosing with 10 cc. of a 5 per cent solution of copper sulfate.—*Comp. Path. Therap., Jan., 1945.*

Leucemia and lymphomatosis differ, although they are closely related. Neurolymphomatosis usually localizes in certain organs or nerves—leucemia affects these and also the principal blood-producing centers.—*From Comp., Path. Therap., Jan., 1945.*

Allowing horses to browse in stalk fields following damp, rainy weather may be disastrous, according to a report from the University of Illinois. Brain symptoms commonly seen are excitement, pressing forward, walking in circles, short or wobbly steps, incoördination, and blindness. Death often follows in two or three days.

Tetrachlorethylene, which has been so successful in treating hookworms in dogs is also effective against these worms in cattle, sheep, and fur-bearing animals. Discovery of its anthelmintic value is credited to Dr. M. C. Hall; his results on animals were so uniformly successful that it was tried on man and proved equally efficient. —*U.S.D.A.*

Hamsters are more susceptible to *Clostridium chauvéi* than are guinea pigs. One-fifth of the lethal dose for guinea pigs will cause death of the hamster. *Sci. April 6, 1945.*

Early development of feathers is a good indication that the chicken will make a desirable broiler or fryer, and rapid gain in weight between the age of 3 weeks and 6 weeks improves the prospects.—*USDA.*

Quick recoveries have been recorded when cats, rabbits, and cattle infected with coccidiosis were treated with quinacrine. A single intravenous dose was sufficient in work reported in the *Bulletin of the Academy of Medicine of France.*

Concentration of hemoglobin is a valuable clinical aid to diagnosis and prognosis of anaplasmosis. Animals having less than 30 per cent of the normal amount of hemoglobin stand little chance of survival under range condition.—*Vet. Med., Aug. 1945.*

A diagnosis of enteritis in swine is no more satisfactory than a diagnosis of dermatitis. An effort should be made to determine the exact cause and nature of the disease process in order to plan a logical program of treatment and control.—*L. P. Doyle, Cornell Vet., April, 1945.*

The magnesium content of the blood is so low in Johne's disease in sheep that it may serve as an aid in diagnosis. Two organisms may be found, singly or together, in clinical cases—*Mycobacterium johnei* and *Mycobacterium johnei* var. ovine.—*From Comp. Path. Therap., Jan., 1945.*

Canine Tuberculosis: A Report of the First Case Officially Diagnosed and Confirmed in Puerto Rico

O. A. LOPEZ-PACHECO, D.V.M.
Hato Rey, Puerto Rico

ON MARCH 19, 1945, a patient was admitted to the Hospital para Animales "Lopez-Diaz" at Hato Rey, P.R. It was a male Dachshund, about 4 years old, weighing 10 lb. The abdomen was distended and tense. The owner of the dog, a physician, stated that he had noticed the abdominal distention for about two weeks. The animal was extremely emaciated, and there was a mucopurulent discharge from the eyes sunken deeply in their orbits. The appetite was poor, feces bloody, respiration dyspneic, and the temperature was 104 F. Auscultation clearly revealed the presence of fluid.

A paracentesis was performed to evacuate the contents of the abdominal cavity, thrice daily. The animal was observed until March 28, when the owner consented to euthanasia. During all this time after paracentesis had been performed, the temperature remained below normal, ranging from 92.2 to 99 F.; the pulse was weak, and the appetite was completely lost.

At the autopsy, the writer found at first sight a fibrinous exudate on the pleura, resembling so-called "grapes" or "pearl". Immediately calling Dr. Alfonso Rivera, who has a vast experience in the field of bovine tuberculosis, he agreed that the lesions had all the gross characteristics of tubercles. The lungs, spleen, liver, and omentum were studded with yellowish nodules ranging in diameter from a fraction of 1 mm. to 1 cm. The mesenteric glands presented numerous lesions. Sections of the lungs showed cavity formations with a purulent exudate present in them.

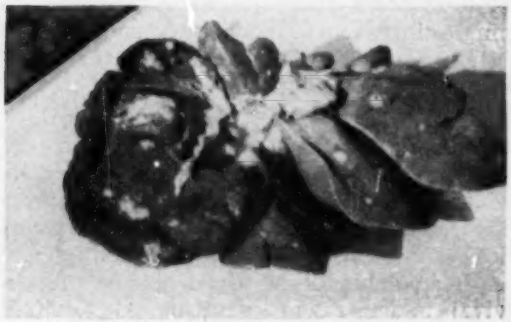


Fig. 1—Liver of dog described in this case report, showing tubercles on visceral surface.
Fig. 2—Liver of same dog showing tubercular lesions on parietal surface.

which were found to be 5,000 cc. of bloody liquid containing flaky particles of fibrin. No culture of the fluid was undertaken to ascertain the nature of the microscopic organisms present, if any. The nature of the fluid[1] together with the other symptoms led us to suspect tuberculosis.[2]

The only medication used consisted of subcutaneous injections of Aricyl (Winthrop), 1.0 per cent sol., 1 cc. every other day; methenamine tablets, 1/2 Gm. twice daily; and vitamins D and A in capsules

These organs were removed, placed in 10 per cent formalin solution, and submitted to the Department of Pathology, School of Tropical Medicine, University of Puerto Rico, for pathological examination on April 2. Their report dated May 8, 1945, follows:

Gross.—The specimen consisted of several organs removed at autopsy. Lungs, spleen, and omentum were recognized. All the tissues

The author is director of the *Hospital para Animales, "Lopez-Diaz,"* Hato Rey, P.R.

were studded with yellowish nodules ranging in diameter from a fraction of 1 mm. to 1 cm.

Microscopic.—In the liver there were large conglomerate tubercles showing extensive zones of central coagulation necrosis, surrounded by epithelioid cells, lymphocytes, and early giant cells of the Langhans's variety. In

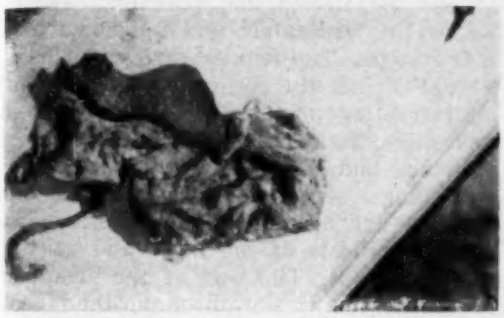


Fig. 3—Section of omentum and spleen of same dog studded with nodules or so-called "grapes."

the lungs there were numerous isolated and conglomerate tubercles in one large zone, which were formed by epithelioid cells, lymphocytes, and poorly developed giant cells of the Langhans's type. Central necrosis was extensive, and in one area, there was a cavity formation with the presence of purulent exudate. The pancreas showed no tubercles. The spleen showed several tubercles formed by epithelioid cells and showed central coagulation necrosis. There were poorly developed giant cells at the periphery of the tubercles.

Ziehl-Neelsen Stain of Spleen, Lungs and Liver.—Long beaded acidfast bacilli were present.

Diagnosis.—Tuberculosis.

s/G. M. CARRERA, M. D.

CONCLUSIONS

This is the first case of canine tuberculosis reported in Puerto Rico and also the first one confirmed by a laboratory of pathology.

It is a strange coincidence that the owner of the dog, a physician, was a specialist in tuberculosis, practicing at one of the most important hospitals for tuberculosis patients; however, he insisted, when I mentioned the possibility, that the dog had not been in that hospital at any time so the possibility of it contracting the disease from that source directly was ruled out.

The writer regrets that no attempt was made to verify his clinical diagnosis by examining the body discharges, the abdominal exudate for *Mycobacterium tuberculosis*, performing the tuberculin test,[3-7] or by taking adventage of his x-ray facilities to obtain skiagraphs of the lungs which no doubt would have proved most valuable and interesting, since according to Kirk and Schnelle[4] such pictures are rare. Typing the organism also would have proved valuable. According to Lovell and White[5] in 22 postmortem examinations in which tuberculosis was diagnosed, the human type of bacilus was found in 18 cases and the bovine type in 4, the lesions of this last type being in the mesenteric glands, while those of the human type were in the lungs or alimentary tract. Since in our case tuberculosis lesions were abundant in every one of these organs, it cannot be assumed that it belonged to a definite type except for the fact that the human type of bacillus seems to be more prevalent in dogs according to Kolda[6] and the above mentioned report.

References

[1]Gaiger, S. H., and Davies, G. O.: Veterinary Pathology and Bacteriology (2nd. ed.) (1938): 311.

[2]Brumley, O. V.: Diseases of the Small Domestic Animals (3rd. ed.) (1938): 565-566.

[3]Kirk, H., and Schnelle, G. B.: Index of Diagnosis (Canine and Feline) (1939): 12, 56.

[4]Kirk, H., and Schnelle, G. B.: Index of Diagnosis (Canine and Feline) (1939): 520-521.

[5]Lovell, R., and White, E. G.: Tuberculosis in Dogs. Brit. J. Tuberc., 34, (1940): 117-133; Biol. Abstr., *16*, (1942): 194.

[6]Kolda: Klinicke spi. vys. sko. zverolekarske, Jan. 10, 1924. Referred to by Kirk, H., and Schnelle, G. B.: Index of Diagnosis (Canine and Feline) (1939): 196.

[7]Merillat, L. A.: The Principles of Veterinary Surgery (2nd. ed.) (1917): 70-71.

Avian Pneumoencephalitis Vaccination Experiments

The high mortality experienced in some flocks infected with this disease indicates that it is potentially a serious menace to the poultry industry.

Encouraging results were secured from a method of vaccination, using formalinized vaccine injected intraperitoneally in two doses five to seven days apart. Egg production did not fall off nearly so badly in vaccinated as in unvaccinated flocks, and the death loss was held at a low level. These results were obtained on birds 3 to 4 months old, but no protection was conferred when chicks were vaccinated at the age of 2 weeks.

"Work will proceed toward refining the vaccine and gathering additional information, particularly regarding its use in turkeys," says Dr. J. R. Beach in reporting this work in *Nulaid News* (Feb., 1945).

Swine Coccidiosis in Venezuela

RICHARD NOVICKY, D.V.M.
Caracas Venezuela

SWINE COCCIDOSIS was first reported in 1877 by Rivolta, who attributed to *Eimeria zurnii* a severe enteritis which was epizoötic among pigs. There is no further mention of this disease until 1921, when Douwes, in Holland, reported an Eimeria frequently found in pigs, which he called *Eimeria debliecki*. Swine coccidiosis also was reported from Germany and France in 1921, from England in 1923, from the United States in 1924, from Russia in 1926, and from Java in 1927.

In November, 1944, we in Venezuela were able to show that swine coccidiosis was the cause of several deaths among pigs. The first case diagnosed was in a pig from a farm situated in Los Teques, Miranda. In May, 1944, some newly weaned pigs on this farm developed a severe diarrhea, anorexia, and weakness. Two animals died, and though the others recovered, their physical development was retarded. Late in October of the same year, a new lot of weanlings was attacked, as well as some of the animals which had recovered from the attack in May.

Of this latter group, a Large Black pig, born in March, 1944, and weighing 23 kg., was sent to the Institute for Veterinary Research in Caracas, because of retarded growth, emaciation, and weakness. The pig walked incoördinately and fell down after a few steps. The temperature was 39.6 C., (103 F.), and the conjunctiva was anemic and secreting profusely. The pig died the next day and, at autopsy, showed a general cachexia and anemia, pueumonic foci in both lungs, serous infiltration of the epicardium and around the mesenteric lymph nodes, cirrhosis of the liver, and swelling of the spleen. The wall of the small and large intestine was swollen, and the mucosa was anemic, hypertrophic, and wrinkled.

The lesions indicated a bacterial or parasitic disease of the intestinal mucosa. A large number of coccidial oöcysts were found in smears from the mucosa and from the intestinal content.

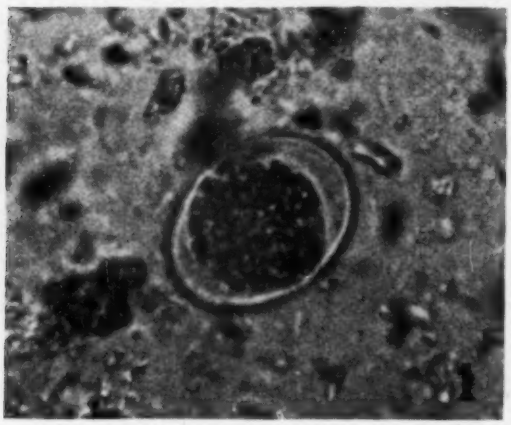


Fig. 1—Unsporulated oocyst of Eimeria debliecki. x1200.

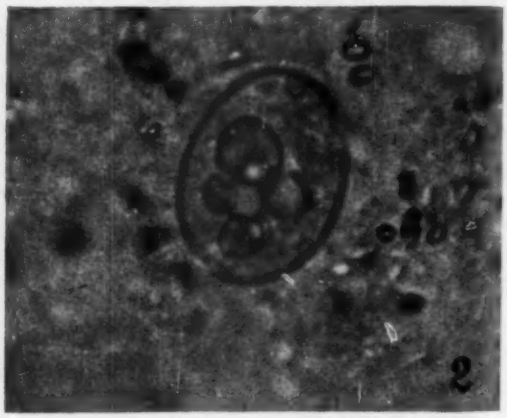


Fig. 2—Sporulated oocyst of Eimeria debliecki. x1200.

The majority of oöcysts were ovoidal to ellipsoidal in shape, but some were oval. Size ranged from 16.5 to 24 μ in length, and from 13 to 18 μ in breadth. We did not see any micropyle. The wall of the oöcyst was double-contoured, smooth, mostly colorless, but, in a few cases, a light brownish color was noted. Some fecal oöcysts showed sporulation, with four sporocysts inside. The characters of the oöcysts were as described by Douwes for *E. debliecki*.

A second case of swine coccidiosis was

seen a few days later among the pigs on farm Y at Caracas, *Distrito Federal*. These were purebred Tamworth and Duroc-Jersey hogs. The herd, composed of some 75 animals, was free from hog cholera.

On this farm, from time to time during the preceding two years, newly weaned pigs had been subject to a diarrhea lasting from four to seven days. Some recovered without any impairment of their physical development; others remained pot-bellied and stunted. The disease had not been malignant until November, 1944, when diarrhea appeared once more in a group of 31 animals 2 to 6 months old. Some had suffered from this illness several weeks earlier, but this time the attack was more serious and 3 pigs died.

The pigs of this lot varied in size. Some, in good physical condition, had developed according to their age, but others were stunted, thin, and pot-bellied. Almost all of them showed a severe diarrhea, with liquid stools varying in color from greenish to dark brown. They also suffered from conjunctivitis with secretion. The sick pigs were dejected, very weak, stood aside from the healthy ones, and frequently lay down. When walking, their steps were incoördinated and they swayed. Some showed complete anorexia and others ate a little. The temperatures varied from 38.8 C. to 40.6 C. The diarrhea lasted from five to eight days, and 3 pigs died during this period. When the diarrhea stopped, the pigs slowly returned to normal, but they remained a dejected lot, and 1 of them died three weeks later.

All pigs which died were underdeveloped as a result of an earlier diarrhea. The pathological findings, *post mortem*, varied widely. There was a general emaciation and a severe anemia. There were serous infiltrations of the subcutaneous tissues of the neck and throat, and infiltrations in the thigh muscles, the epicardium, and the lymph nodes. There was cirrhosis of the liver and swelling of the spleen and the mesenteric lymph nodes. The wall of the intestine was thickened and edematous, and its mucous membrane was anemic, hypertrophic, and wrinkled. Some parts of the mucosa of the small intestine displayed small hemorrhages.

In the feces and in scrapings of the mucosa, a great number of oöcysts of *E. debliecki* were found. The structure of their walls and their form were similar to those found in the pig from farm X; only the dimensions varied a little more. The oöcysts measured from 13.5 to 27 μ. in length and from 12 to 21 μ. in breadth.

Judging from the clinical manifestations, the pathological picture, and the microscopic examination, the disease and the deaths here described were provoked by coccidiosis. In order to get precise knowledge of the spread of the infection among the pigs at farm Y, we examined the feces of all pigs. The results were as follows: (1) 2 boars, 3 and 4 years old, negative; (2) 12 sows, 18 months to 4 years old, 9 negative (75%), 3 positive (25%); (3) 18 pigs, 6 to 18 months old, 10 negative (55.5%), 8 positive (44.5%); (4) 46 small pigs, 3 to 6 months old, 17 negative (36.05%)), 29 positive (63.95%); (5) 24 weanlings, 14 to 60 days old, all negative.

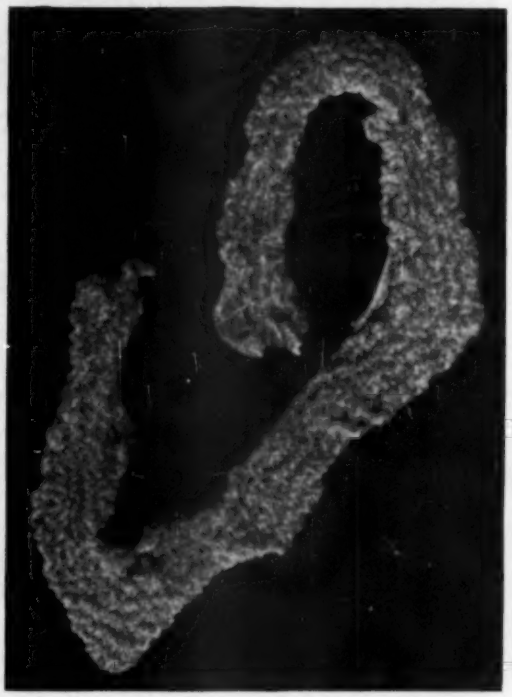
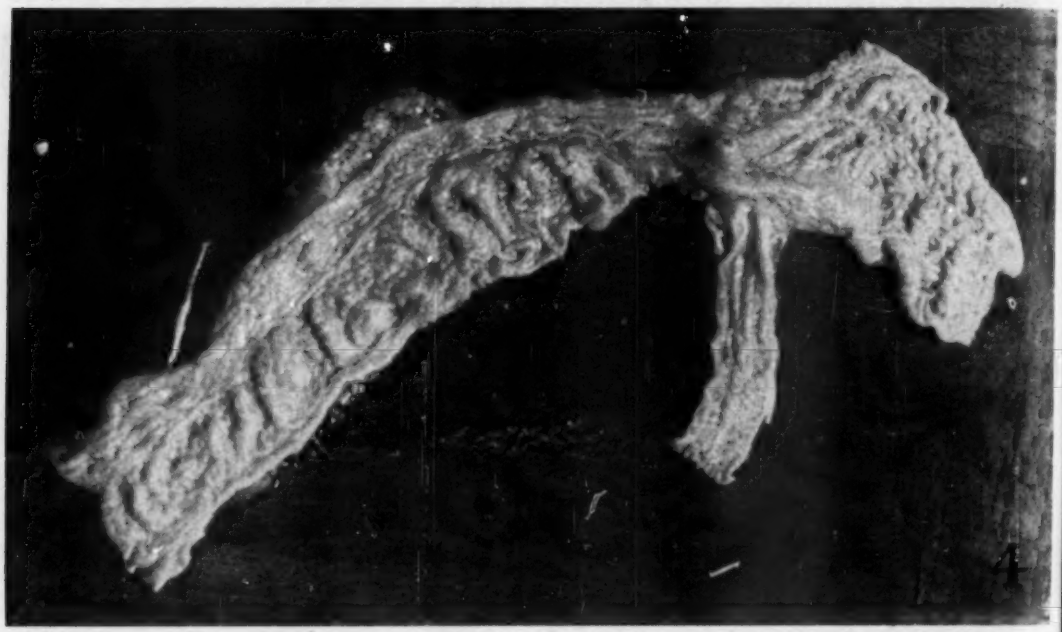


Fig. 3—Part of small intestine of pig with swine coccidiosis, showing thickened, wrinkled, and anemic mucosa (about ½ natural size).

It will be noted that the highest rate of infection appeared among small pigs from 3 to 6 months old (63.95%), that the rate decreased among pigs 6 to 18 months old (44.5%), and that it was still lower in

pigs above that age, disappearing almost completely in pigs more than 2 years old. The infection on farm Y was widespread and probably had been established there for a long time. This deduction seems to be supported by the fact that cases of diarrhea had been observed previous to 1944. It is quite probable that these, too, and the States of Aragua, Guarico, and Miranda, 17 animals (27.4%) were found to be infected with coccidia. When oöcysts are found in 27 per cent of adult (12 to 18 months) pigs, it must be supposed that coccidiosis has been rather widespread in the herds of the country. It appears quite probable that coccidia were implicated in



—*Photos by Novicky*

Fig. 4—Cecum and part of colon of pig with swine coccidiosis, showing hypertrophy of mucosa and edematous swelling of intestinal wall (about ½ natural size).

were caused by coccidiosis and that the resistance of adult pigs was due to an immunity acquired through one or repeated infections at an early age. The hygienic conditions on this farm would not prevent a constant reinfection. The fact that the majority of the resistant animals was 18 months old or more, suggests that the process of immunization takes a long time.

The feces of 10 crossbred pigs from the *Distrito Federal* and the State of Miranda were also examined. The ages varied from 12 to 18 months. Three of them were positive for oöcysts of *E. debliecki* but showed no symptoms. From another lot of 52 native and crossbred pigs, of approximately the same age as the former group, from breeding places in Aragua and Guarico, a total of 14 animals was positive for oöcysts.

Of the 62 native and crossbred pigs from different herds in the *Distrito Federal* the diarrhea and other digestive disturbances so frequently observed among newly weaned pigs, which generally are ascribed to the action of germs or bad nutrition.

Early authors have claimed that coccidiosis of pigs is benign, but recent investigators do not agree with this opinion, though they admit that the coccidia of pigs are probably less pathogenic for their hosts than the same parasites of other animals. Both groups of authors agree that a heavy invasion of coccidia may provoke a severe diarrhea and even cause the death of a young pig. The course of the infection on farms X and Y leads us to believe that coccidiosis of pigs should not be considered a benign disease. It seems to be true that this parasite is less pathogenic for pigs than for other animals and that only a heavy infection may be fatal. In any event, coccidiosis weakens the host and

makes it more susceptible to other diseases, either infectious or non-infectious. All the pigs which survived an attack of coccidiosis remained physically exhausted, and their development often was delayed for months, causing substantial economic loss to the farmer.

SUMMARY

The existence of swine coccidiosis provoked by *Eimeria debliecki* was diagnosed in Venezuela. The disease was observed in two herds of purebred pigs (Tamworth, Duroc-Jersey, and Large Black) and among native animals also. The mortality among infected pigs on both farms was relatively low, but young animals which survived were retarded in their physical development. Pigs older than 1 year showed an immunity probably due to a moderate infection and ensuing reinfections during early life. The development of immunity probably takes several months.

Excreta of 62 native and crossbred pigs from different herds in the *Distrito Federal* and the States of Aragua, Guarico, and Miranda were examined for coccidia, and 17 animals (27.4%) yielded the oöcysts of the same parasite. It may be postulated that the disease is widely spread among herds in Venezuela.

Bibliography

Becker, Elery R.: Coccidia and Coccidiosis of Domesticated, Game and Laboratory Animals and of Man. Collegiate Press, Inc., Ames, Iowa, 1934.

Hagan, William Arthur: The Infectious Diseases of Domestic Animals (with Special Reference to Etiology, Diagnosis and Biologic Therapy). Comstock Publishing Co., Inc., Ithaca, New York, 1943.

Kudo, Richard Roksabro: Protozoölogy. Charles C. Thomas, Springfield, Illinois, 1939.

Vogelsang, E. G. Gallo, P., and Loreto, A.: Coccidiosis en los conejos; tratamientos por la "Atebrina" intravenosa. *Rev. Med. Vet. y Parasitol.*, tomo 1, 1939, 85-87. Caracas.

Biester, H. E., and Murray, C.: Studies in Infectious Enteritis of Swine. IV. Intestinal Coccidiosis. *J. A. V. M. A.*, *75*, (1929): 705-740.

Biester, H. E., and Schwarte, L. H.: Immunity in Swine Coccidiosis. *J. A. V. M. A.*, *81*, (1932): 358-75.

Noeller, W., and Frenz, O.: Zur Kentnis des Ferkelcoccids und seiner Wirkung. Deutsche. tierärztl. Wchnschr., Bd. *30*, (1922): 1-3.

Culbertson, James T.: Immunity Against Animal Parasites. Columbia University Press, Morningside Heights, New York, 1941.

Four ways of controlling parasites in sheep are listed by the Livestock Sanitary Committee, Sioux City, Iowa: Feed a balanced ration and rotate pastures; do not overstock the range; feed a phenothiazine-salt mixture; and provide clean, pure water at all times.

Clinical Tests of Penicillin

Zaki Marcos, bacteriologist of the Cairo (Egypt) Veterinary College (*Vet. Rec.*, Sept. 15, 1945), credits penicillin with being effective in the majority of animal diseases due to gram-positive organisms. Penicillin, ranging from 30,000 to 60,000 units in 10-cc. doses, three times a day for three days, was found to be "almost specific in the treatment of strangles of horses," and to be promising in epizoötic ovine pneumonia, equine epizoötic lymphangitis, and bovine pyelonephritis. The drug was not effective in virus disease or in spirochetosis of fowl.

C. A. V. Barker, MacDonald College (Quebec), reporting on the use of penicillin infusions of the udder of cows affected with streptococcal mastitis (*Canad. J. Comp. Med.*, Sept., 1945), describes objectionable local and systemic reactions and uncertain microbicidal results. But 16 out of 32 treated quarters were pronounced noninfected a month after treatment. Swelling and hardness of the treated quarters, clots of milk following the treatment, slight fever, and anorexia were noted from infusions of 100 cc. (25,000 units) of sodium penicillin solution into the udders of mastitis-affected cows.

Iodinated Protein and Milk Production

Thyroprotein, or iodinated protein, has been heralded as a product which might stimulate production of milk and butterfat far beyond the normal level. One of the recent reports is from the West Virginia Agricultural Experiment Station, where two groups of 3 Holstein-Friesian cows were fed 15 Gm., daily, of thyroprotein, for four-week intervals, in a reversal feeding trial. Milk production is reported to have risen from 5 to 20 per cent, and fat production from 25 to 50 per cent.

A trial which ran for a longer period is reported in *Veterinary Record* (July 21, 1945). Considerable disturbance of the metabolism was observed when it was used, and there is danger of some degree of illness. The cows in this experiment lost a considerable amount of body weight, which would account for some of the increased flow of milk. Extra rations of oil

cake, compound, or protein feed were needed to offset this loss in weight, so that the increased production was not the result of the iodinated protein alone. In the later stages of lactation, milk production was reduced more rapidly than usual, despite the continued feeding of the thyroprotein.

In announcing the results of this experiment, the Ministry of Agriculture and Fisheries and the Department of Agriculture of Scotland make it plain that they do not intend that thyroprotein shall be made generally available.

Leishmaniasis (=Kala-Azar) of Dogs

The Medical Corps map (October JOURNAL, p. 194) showing the wide distribution of human leishmaniasis—visceral, cutaneous, and mucocutaneous—in Asiatic, African, and South American mainlands may have left an erroneous impression as to a widespread tropical disease that is interchangeable between man and animals, especially dogs. Not having told more about kala-azar in dogs, the map and its brief caption leave a wrong impression in that there is no mention of danger in connection with the dogs which returning soldiers are alleged to be bringing into the United States.

The late Guy A. Roberts,* who spent most of his professional life in tropical America, frequently spoke of canine leishmaniasis in Brazil. Faure-Brac, a public service veterinarian of the Alps-Maritime region of France, recently makes the somewhat astonishing statement (*Bull. Acad. vét. de France,* July, 1945) that in the Mediterranean littoral of Europe, 18 per cent of the dogs are affected and, in addition, that about 11 per cent are suspected of being inapparent carriers of the disease. Moreover, this author states that dogs must be regarded as "the reservoir of the virus." Cesari (*ibid.*) speaks of the prevalence of canine kala-azar in other parts of France, notably Paris, where the small animal practitioners do not hesitate to diagnose that disease in dogs that have sojourned in Côte d'Azur, even without troubling to make a microscopic examination.

Kelser and Schoening (*Manual of Veterinary Bacteriology, Fourth Edition,* 1943) point out that the three species of the genus Leishmania (*donovani, canis, infantum*) are to be regarded as one and the same organism—an oval or round nonmotile cell 1.5 to 2.5 μ thick if oval, and 2 to 4 μ in diameter if round, found *postmortem* in the spleen, liver, bone marrow, and lymph nodes of affected vertebrates.

The genus was named for Leishman who discovered the organism while studying dumdum fever in India in 1903: the species *donovani* derives its name from Donovan of the same period, who found the same organism in studies of malarial cachexia. Both diseases were kala-azar. Nicolle, at the Pasteur Institute of Tunis, isolated a Leishmania in children affected with kala-azar, which he named *Leishmania infantum.* Both *L. donovani* and *L. infantum.* Nicolle are indistinguishable from *L. canis.*

Kala-azar of dogs is a chronic furfuraceous dermatitis, spotted or diffuse, ulcerative or abrasive, with more or less rapid signs of fatigue. Depilations about the eyes, nose, axilla, thighs may become general. Conjunctivitis, corneal opacity, loss of vision, external otitis, and lymphadenitis are mentioned in descriptions of the pathogenesis.

Being a generalized infection, there can be no alternative to systemic treatment. Salts of antimony, besides being objectionably toxic, have little merit, and the proprietary drug, diaminidine (diamidinodiphenoxypentane), a complex chemical of the CHNO type, reported to be giving excellent results, is too new to recommend without reservation.

These facts appear to be apropos in view of any misconception the map (*loc. cit.*) might have created.

Thiouracil, which is used in treating toxic goiter, may provide a better treatment for cirrhosis of the liver than has previously been available. When 0.1 per cent of this substance was fed to rats, along with a ration that regularly produced cirrhosis of the liver, this condition did not appear.— *Sci. News Letter.*

*Guy A. Roberts (K.C.V.C., '03), director of livestock sanitation of the Dominican Republic at the time of his death in 1940, made important contributions to our knowledge of tropical animal disease for many years.

New Foot-and-Mouth Disease Vaccine

Indirectly, and without confirmation, comes a report that the cumbersome vaccination of Vallée and others against foot-and-mouth disease may be replaced by simply treating the affected animal's blood with crystal violet and injecting the self-made product into the exposed animals. The cost is trivial and typing unnecessary. The method is said to have been developed by the Pasteur Institute of Morocco. Details forthcoming.

Apropos of the subject is the report of Jacque Prat (*Rev. Méd, Vét.*, May 1939) relative to the use of convalescent blood for vaccinating the exposed animals of a stricken herd, which was practiced in France several years prior to 1939. The blood of the recovered animal exerted considerable, if not complete, protection. The hemovaccination reduced the gravity of the attack in all instances and always prevented the various complications. The occasional abscesses at the site of the injection were of no consequence.

Another Antibiotic Product

Bacteriologists and laboratory workers have often noted that, at times, organisms appeared on blood agar plates from direct inoculation, but were not found in broth cultures made at the same time. It remained for Johnson, Anker, and Meleney, at Columbia University (*Science*, Oct. 12, 1945) to reason that some bacteriostatic activity was present in the broth cultures. They found one particular strain of gram-positive organisms that was particularly active in this regard. It was a culture of *Bacillus subtilis*, isolated from tissue debrided from a compound fracture of the tibia of a case known as Tracy I. Cell-free filtrates of the broth cultures of this bacillus were found to possess strong antibiotic activity and to be nontoxic.

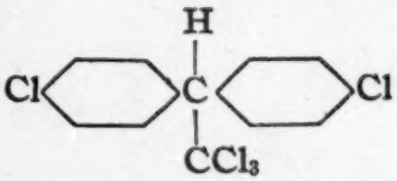
Maximum titer is obtained if the broth culture is harvested after three to five days of incubation. The active substance is neutral, water soluble, and stands heating at 100 C. for 15 minutes. It has no hemolytic action, nor have acute or delayed symptoms of toxicity been observed in experimental animals repeatedly injected intraperitoneally or subcutaneously. Its use in human beings has been limited to topical application in a small number of infections with streptococci and staphylococci.

This substance, which has been named Bacitracin, is highly bacteriostatic against streptococci of groups A, B, C, and G; pneumococci of types I, II, and III; the anaërobic staphylococci, and *Clostridium welchii*.

Bacitracin is very similar to, if not identical with, Subtilin, which was produced and reported by Dr. A. Salle, University of California, Los Angeles.

DDT (Dichloro-Diphenyl-Trichlorethane): Toxicity and Indications

Abroad, DDT has been known under various names: Gesaro, Neocid, GNB, GNB-A, and SBLY. It is made from monochlorobenzene, chloral hydrate, and sulfuric acid. Its structural formula is:

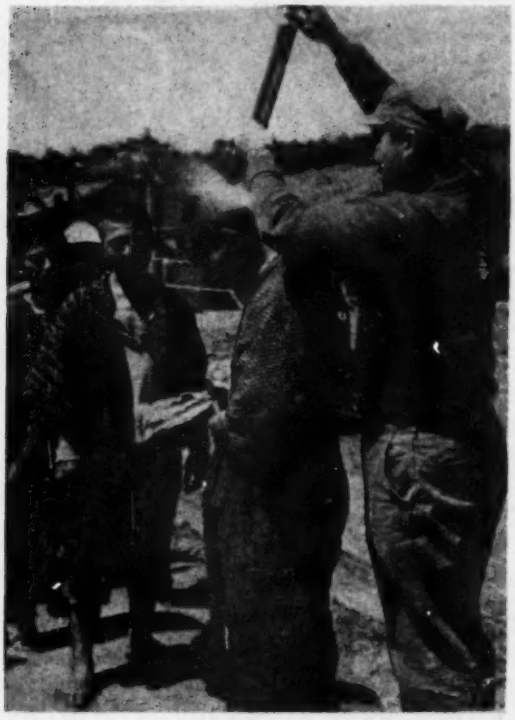


DDT is a white, sometimes yellowish white, crystalline chemical of remarkably stable nature. Humidity agglomerates the technical grade but does not alter its action. It is soluble in many organic solvents but insoluble in water, and but partly soluble in vegetable and mineral oils. The best solvents are cyclohexanone, xylene, soybean oil, cottonseed oil, fuel oil, and kerosene—in that declining order, with solvency 100 per cent in the first named and 8 per cent in the last. Its toxic properties are stressed by both the Food and Drug Administration and the U. S. Public Health Service. The toxicity is somewhat less than that of lead and fluorine. Although said to be poisonous by contact, no toxic accidents among employees of the manufacturers have been reported. It kills insects by slow paralysis.

The symptoms of poisoning in warm-blooded animals are loss of appetite, excitement, tremors, and convulsions. As antidotes, the Surgeon General's Office recommends tribromethanol, paraldehyde, or barbiturates.

Its main indications are destruction of mosquitoes, lice, bedbugs, flies, moths, live-

stock lice, carpet beetles, brown dog tick, horn flies, cotton bollworm, *et al.* Its effectiveness against cockroaches, heel flies (*Hypoderma bovis* and *lineatum*), screw-



—Signal Corps, U. S. Army Photo

Okinawa civilians make use of DDT after being shown its usefulness by the Medical Corps.

worm fly (*Cochliomyia americana*), spiders, poultry mites, chiggers, ants, and spiders, is low, if any.

In dry form, the Surgeon General's Office recommends: DDT, technical grade, 10%, pyrophilite (a clay), 90%; for spraying: DDT, technical grade, 6%, benzyl benzoate, 68%, benzocaine, 12%, and wetting agent (Tween 80), 14%. The proprietary drug, Tween 80, is used by the Medical Department, U. S. Army. This mixture is diluted with 5 parts of water and used within twenty-four hours.

The full story of DDT in veterinary medicine, in respect to exact dosage, toxicity, methods, and indications may be expected to take form rapidly.

Poultry rations supplemented with 0.5 per cent yeast raised egg production 7.0 per cent in a Rhode Island experiment.

DDT Spray for Sheep

Unshorn sheep can be successfully sprayed with a mixture of 4 lb. of 50 per cent (8 lb. of 25%) DDT in 100 gal. of water. Only the wettable form of DDT should be used, and the sprayer should develop a pressure of at least 400 lb. It requires 2 to 3 qt. of the spray material per sheep. The cost of the material will be about 2 cents per head; a good spray machine will treat from 200 to 300 sheep per hour. Workers at the University of Idaho found that the spray method was effective against sheep and wood ticks, and that long wool tends to hold the DDT and to protect it from the sun longer than short wool.

Forsell's Treatment of Equine Heaves*

The bilateral pneumothorax preconized by Forsell as a treatment for heaves gave 5 failures, 12 successes, 1 quite satisfactory and 3 very satisfactory results, out of 21 cases treated by A. Paobo (*Doctorate Thesis,* University of Tartu-Esthonia). The Forsell intervention consists of insufflating each pleural cavity three weeks apart. The intrathoracic air pressure is brought up to 3 mm. Hg. The injection is made at the rate of 2 to 3 liters per minute. The severe cases are injected with 10 liters of air and the less severe ones with 20 liters. The operation is done standing and without anesthesia. Heart stimulants are contraindicated. Fasting for ten hours precedes the operation. The treated horses are rested for two weeks following the last injection and put to work gradually. We have no reports that the intervention was ever practiced in this country.

Carlstrom and Alegren (*Skand. Vet. tidskr. 30,* (1940): 10) explain the mechanism of pulmonary emphysema (heaves) as a contraction of the fine bronchioles and of the alveoli, provoked by the inspiration of cold or humid air, and the trapping of inspired air against the free expulsion of normal respiration. Under the continuous stress of labored breathing, the permanent damage (dilatation) to the air cell is inevitable.

*Abstr. Encyl. Vét. Period. 3, (May-June 1944): 179.

A New Treatment of Heaves

At the July, 1945, meeting of the *Académie Vétérinaire de France*, there was accepted for publication a new treatment for heaves, based on a palliative, if not curative, remedy for emphysematous asthma of man, long used by the senior author. The treatment is a complex medication aimed at the chronic pulmonary emphysema and the dyspnoea characteristic of equine heaves. It consists of intravenous injections of octyl alcohol, a solution of magnesium hyposulfite and of calcium chloride, together with subcutaneous injections of iodated peptone and of the patient's blood (autohemotherapy), given daily for two weeks.

Octyl alcohol (=octanol) was first used for high arterial blood pressure and for a cardiac tonic in scleradyspnoea, as a dechlorinating diuretic and liquefier of the blood. Iodine is well known for its deobstruent action in scleroses, and the autohemotherapy and polypeptone for their antishock action. Complicated as the medication is acknowledged to be, a trial on 4 horses gravely affected with heaves showed marked amelioration on the sixteenth day in both general condition and respiratory distress. The accelerated breathing was barely noticeable while at work. The cough was not changed. There was no relapse in seventeen months.—*Drs. P. Cantonnet and J. F. Fouchier, "Nouveau traitement de la pousse du Cheval," Bull. Acad. de France, 28, (July 1945): 194-201.*

Penicillin in Acute Mastitis

That intravenously injected penicillin, even in massive doses, does not penetrate through the secretory mechanism of the bovine mammary gland and leave the body by way of the milk is pointed out editorially in the *Journal of the American Medical Association* of Sept. 8, 1945. The studies of Seeley, Anderson, and Plastridge, Storrs Agricultural Experiment Station (*Science, 102* (July 13, 1945): 44) and of Bryan, Horwood, Huffman, and Pearson, Michigan State College (*Vet, Med., 40,* (March, 1945) : 87-89) on the rate of excretion of penicillin in bovine milk are cited. Though no opinion is expressed as to the relationship of the nonpermeability to the therapeutic value of penicillin in mammary infections, the conclusion might be drawn that the arrival of penicillin at the mammary level *via* the blood stream is not consequential. In the face of clinical reports, the contrary appears to be true, however. At the recent Eastern Iowa meeting, there was strong evidence in favor of penicillin in bovine mastitis, both in respect to local and systemic use. But, a stronger argument in defense of this antibiotic treatment is that of Captains Hodgkinson and Nelson, U. S. Army Medical Corps (*J. Am. M. A., 129,* (Sept. 22, 1945) :269-270), on acute puerperal breast infections of women, wherein intravenous injections of penicillin were found to be quite sensational as compared with sulfonamide therapy. Since the human breast infection is generally staphylococcal and the bovine infection often so, the superiority of penicillin over sulfa drugs is a natural expectation.

Fluoroacetate of Sodium: Deadly Raticide

Chemists and biologists, of the U. S. Fish and Wildlife Service, announce the discovery that sodium fluoroacetate is the deadliest substance ever employed as a rodenticide. It was developed at the Patuxent Research Refuge near Washington, D. C., and at the Wildlife Research Laboratory near Denver, Colo., where it was named 1080 for convenience. Being soluble in water 1080 can be readily distributed in bait. Five mg. per kilogram of body weight will kill rats, meaning that a tiny amount (0.0002 oz.) will kill a half-pound rat. If a rat-infested premise is properly baited, says the report, there will be no rats left. Because it is also dangerous to dogs, cats, and possibly game and livestock, it may not be released for general household use.— *From Science, Aug. 31, 1945.*

When injected subcutaneously into mice, the benzyl ester or penicillin was at least three times as potent as ordinary sodium penicillin (aqueous solution or suspended in oil). Taken by mouth, the benzyl ester is substantially as effective as an equivalent weight of the sodium salt given by subcutaneous injection.—*Sci., Aug. 10, 1945.*

NUTRITION

Nutrition Notes

Corncobs were found to be 64 per cent as valuable as the grain itself for energy or fattening purposes in Ohio feeding trials.

Clover hay may lose from 25 to 40 per cent of its dry matter by leaching in the rain, the readily available fractions disappearing most rapidly, of course.

A single large dose of either vitamin A or vitamin D can be used effectively as a prophylactic measure against the respective deficiency diseases in the rat.

Abundant riboflavin is highly important in blood building. This vitamin appears to play a rôle in determining the size of the new red blood cells, as well as their rate of formation.

A suitable source of calcium for egg shell formation is essential for egg production (*Bull. 226, Ohio Agric. Exper. Sta.*). Calcium carbonate, poultry feeding grade of limestone, and oyster shell are suitable sources.

Grass silage was satisfactorily preserved when ground barley was added at the rate of 250 lb. per ton of green material. It proved as satisfactory as molasses-grass silage, but was not quite as palatable to cows as corn silage, in tests conducted at Rutgers University.

Phenothiazine, sulfathiazole, sulfaguanidine, and similar drugs must be considered as outright medication and do not come under the heading of feed ingredients, according to the decision of the Nutrition Council of the American Feed Manufacturers' Association, Inc.

Good roughage is supplied by pastures while they are green and growing rapidly, not when they are dry, brown, and short.

Mineral balance is hard to maintain on roughage alone. Grains are high in phosphorus, the element most likely to be deficient.

Calcium alone is not likely to be a serious factor in nutrition unless the only roughage is timothy hay, grass hay, or corn fodder, which have been grown on acid soil.

Nevada poultrymen are warned against the dangers of limberneck or botulism, which birds may develop from eating decaying organic matter — chiefly carcasses and pond scum.

Cotton rats consistently developed large numbers of cavities in the molars within fourteen weeks, when placed on a synthetic diet containing sucrose or ordinary sugar as the only carbohydrate, in experiments at the Wisconsin College of Agriculture.

Calves less than 4 months old or weighing less than 300 lb. do not thrive on pasture, even when supplemented with 3 lb. of grain daily. All calves on pasture should have this amount of grain daily for proper growth and development.

The chickling vetch, *Lathyrus sativus*, is a valuable feed for hens, says A. A. Horvath in *Poultry Science* (July, 1945), but when fed as the sole feed, it appears to be toxic. The toxic principle may be divicine, a pyrimidine base which can be converted to creatinine.

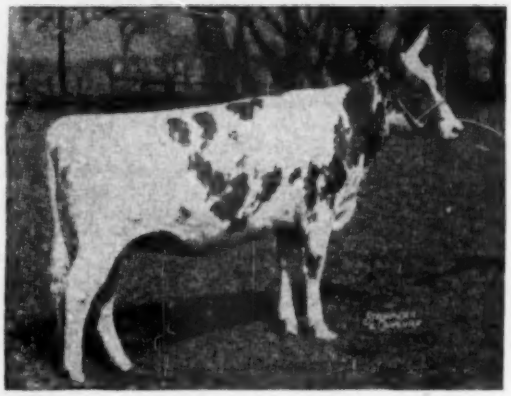
Feeding the Dry Cow

The dry cow is not on vacation. She must meet the demands of a developing calf, replenish her own depleted reserves of minerals and vitamins, and regenerate the mammary tissue which now begins to secrete colostrum. In order to do these things successfully, she must be fed a ration that is easily digested, well supplied with vitamins and minerals, and not too rich in proteins. The basis of such a ration is good roughage, not dry pasture or poor hay. Experiments in Louisiana have shown that the production of beef per acre can be doubled by liming, fertilizing, and mowing pastures.

Failure to supply an adequate ration to the dry cow will be reflected in difficult calving, weak calves, and delayed breeding. The experiments referred to above show that well-nourished cows breed more regularly and raise better calves than cows that are half starved during part of the year. An expenditure of $3 a head for concentrates, while pastures were poor, brought an increase of $6 a head in more and larger calves. The death loss among calves was reduced, thus further adding to the profit derived.

Failure to supply an adequate ration to the dry cow will also be reflected in low production and reduced resistance to disease. A large commercial feed producer reports that careful records kept in a herd of 100 milking cows over a period of ten years indicate that each pound gained by a dry cow means about 25 lb. more milk during the succeeding lactation. It is generally recognized, and well substantiated by numerous trials, that a shortage of vitamin A results in a greater number of weak or dead calves, a higher incidence of retained placentas, an increased amount of respiratory infection and ketosis, and a longer breeding cycle.

The first-calf heifer is not on vacation either, or at least she should not be. If anything, she carries an extra burden because she is building a body and developing a mammary system for the first time, instead of replacing what has been lost through milk production. Heifers that are bred when they weigh 750 lb. and then fed to weigh 1,200 lb. at calving time will produce an excellent flow of milk at a profit, and they will live in health for more years than heifers which are called upon to reproduce before they are fully developed. Each pound of weight gained before the first calf is born means more milk and better health during added years of profitable production.



She is not on vacation.

The average dairy cow remains in the herd until she is about 6 years old, and she actually produces milk for about thirty-six months — four lactation periods of nine months each. If a cow can be retained in the herd until she is nine years old, she will have milked about seventy-two months. If she has been properly fed for efficient milk production and for regular reproduction, these extra years of production will materially increase the profit she has earned for the owner.

Feeding Molasses to Beef Cattle

Substituting molasses for all of the corn in the fattening ration of beef cattle reduced the rate of gain, while it increased the amounts of concentrates and roughage needed to produce a 100 lb. gain. In addition, the molasses reduced considerably the market grade of the slaughter cattle, increased the shrinkage, decreased the dressing percentage, and lowered to about one-half the market grade of the carcasses.

Well Fed but Badly Nourished

That populations apparently well fed can be badly malnourished was shown in a survey made among 868 inhabitants of St. John's, Newfoundland, by the Canadian

Fig. 1—Avitaminotic xerosis conjunctivae.

Council on Nutrition. The documentation of the investigation is a colorful, well-organized report published in the *Canadian Medical Association Journal*. A 36-page, profusely illustrated reprint may be ob-

Fig. 3—Hypertrophic gingivitis with loss of teeth.

tained from the National Research Council, 2101 Constitution Ave., Washington 25, D.C. The pamphlet, among other illustrations, contains 28 color pictures of avitaminotic subjects which hammer home the tragic results of dietary imbalance. Despite adequate calories, proteins, and fats, the extremely low intake of vitamin A, riboflavin, and niacin can be outwardly expressed in the form of grave pathological lesions: cheilitis, nasolabial erythema,

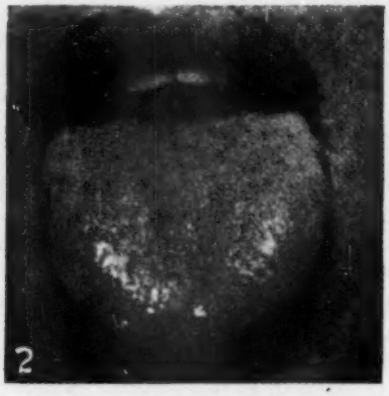


Fig. 2—Glossitis with swelling and atrophy of papillae.

telangiectasis of the cheek, atrophy of the lingual papillae, xerosis conjunctivae, "goose-flesh" skin, dry head hair, blepharitis, fissured tongue, gingivitis, loss of teeth, and other climactic manifestations of these avitaminoses in the human being.

"Telang" Liver Feeding

Furbearing animals are known to develop a typical paralysis of the legs when fed liberal quantities of liver, and it has been suspected that the feeding of so-called "telang" liver was at fault. Experimental evidence on rats indicates that bone fractures are typical of toxicity, and that they are seen at about the third week of feeding. Growth failure always precedes fracture by about a week; death results in a week after the first fracture.

Telangiectasis, noted in cattle livers since 1900, is characterized by dark red or purplish depressed areas beneath the capsule. Upon gross examination on section, these dark areas are seen throughout the organ, being soft, spongy, and engorged with blood. About 3 per cent of all beef livers are condemned for telang; the inci-

dence is highest among steers fed highly concentrated fattening rations over long periods.

The toxic effects from eating large quantities of telang liver are found to be due

—*Journal of Nutrition*

Fig. 1—Weanling rat fed a toxic "telang" liver plus calcium carbonate ad libitum. The typical paralysis of the legs is evident.

to its high content of vitamin A, although the iron content is 50 per cent above normal. There is no variation from the normal liver in content of carotene, ascorbic acid, choline, pantothenic acid, niacin, biotin, and fat content, and investigators are not yet certain whether the telang liver lesions are due to an excess of vitamin A, or whether the increased storage of the vitamin is due to the liver lesion, or the cause of the lesion in such event.

Results similar to those of telang poisoning can be produced by feeding vitamin A (shark liver oil) at the rate of 15,000 units or more daily to rats.—*J. Nutr., July* 10, 1945.

Dairy cows produce more milk with a higher fat content when fed 12 lb. of hay and 30 lb. of silage than when fed less than 5 lb. of hay and enough grain to supply the remaining energy requirements, in experiments by Loosli, Lucas and Maynard, which are reported in the *Journal of Dairy Science* (Feb., 1945).

Rations containing feed ingredients of a fibrous nature, such as oats and wheat by-products, were less efficient for growth, egg production, and maintenance of body weight than feeds of a less fibrous nature, such as corn, whole wheat, and rolled oats, according to Cornell experiments reported in *Poultry Science* (March, 1945).

The Anti-Infective Property of Vitamin A

The belief that vitamin A fortifies resistance to infection, particularly of the upper air passages, was once, and still is, widely entertained. On the basis that a known deficiency of this factor is manifested by visible pathological changes in the aerial mucosa, it is logical to presume that vitamin A puts up a barrier to the penetration of microörganisms. Early workers on avitaminoses, therefore, insisted upon calling it "the anti-infective vitamin," a name that has yet to be discarded because the issue remains to be settled. The fact that laboratory rats deprived of vitamin A develop multiple lesions and die, proved as early as 1928, remains to be rejected on scientific evidence. Admitted that recent trials have shown that there is no difference in resistance to experimental intraperitoneal infection between laboratory rats fed inadequate amounts of vitamin A and rats fed normally (all other things equal), they do not disprove the allegedly low resistance of the aërial mucosa in vitamin-A-deficient animals, notwithstanding that the attempt to increase the permeability of epithelial tissue by vitamin A privation has been unsuccessful. Obviously, the etiology of natural, respiratory, infectious diseases is not that simple. The multiple conditions to which the average domestic animal is exposed (*e. g.* viruses, fatigue, cold, etc.), and which pave the way for infections of the respiratory tract, would first have to be duplicated before conclusions of clinical importance could be drawn from laboratory experiments. Vitamin A deficiency as seen in clinical work is a state of enfeeblement corresponding to the degree of the privation and, therefore, entirely independent of any specific action it may have in letting down barriers to infections. It *does* lower resistance to the penetration of bacteria.

Soybean meal is not a complete feed in itself but rather an excellent source of protein, certain mineral constituents, and a valuable source of certain vitamins for use in conjunction with other feed ingredients. It now is the leading protein concentrate for animal and poultry feeding, says J. L. Gaby in A. E. Staley's *News from the News* (July, 1945).

EDITORIAL

Congress Expands Agricultural Extension Work

The passage of the Bankhead-Flanagan Extension Act by the present Congress puts $25 million at the disposal of the states for the expansion of their agricultural and home-economic extension services. The amount is over three times more than was granted by the Smith-Lever Act of 1914, and many times more than that of the Morrill Act of 1862, which was the first sign of public interest in veterinary medicine in this country. The passage of the Morrill Act corresponds, in time, to the animal-disease tragedies of the War between the States, which led to the organization of the United States Veterinary Medical Association (now AVMA), but no immediate benefit to veterinary medicine accrued therefrom because there was no "veterinary influence" in the states to seize the opportunity the Congress offered. Within its power in our form of government, the Congress always took a keen interest in veterinary medicine while, *per contra*, the states either procrastinated or messed things up. Although the Morrill Act was for "research in animal diseases," many years passed before the recipient states began to spend any of the money for that purpose. Obviously, "research" was not well defined among the horny-handed pioneers, and there were no veterinarians to define it for them. Congress certainly hinted strongly that research men would be needed to conduct the research, and doubtless expected that the states would proceed to found the veterinary colleges needed to furnish them. A new century, and two decades beyond, had to come (1862-1920) before the idea of the Congress of the 1860's began to sprout. As Dr. C. A. Cary, chairman of the Committee on Intelligence and Education, reported in 1893, there never should have been the necessity for the private colleges, which stepped in to make up for state delinquency in veterinary education. That was at the very dawn of reason in that respect—the 1890's.

After 1914, when the Smith-Lever Act had been passed and gave birth to an extension service intended to provide a qualified farm adviser for every county, the veterinary profession, weak, loosely organized, straining to advance without adequate public support of its educational system, and dislocated by the excitement of a great European war, lacked the machinery and power to participate in that excellent agricultural project, though well-enough qualified to advise wisely in its development. In the reminiscent mood, therefore, it seems rational to add that a seat for veterinary medicine at the extension service round table during the formative period would have been of mutual advantage to country, agriculture, and animal health. The twenty-five years of adjustment with neither side superabundantly familiar with what's what in the other's field would have been less belligerent. It is now clear that the intention of these statutes was promoting, not telling off, the practice of veterinary medicine and they said so in understandable terms. On the contrary, the age-old profession, which was charged with guarding the health of livestock, and which was advancing with the other learned professions step by step, was not intended to be displaced, least of all by personnel untutored in the science and practice of an established branch of medicine.

The acts named Morrill (1862), Hatch (1887), Adams (1906), Smith-Lever (1914), Bankhead-Flanagan (1945), with interim amendments and minor acts of Congress, all throw a protective cloak on veterinary medicine, but they were launched without explicit direction for uniform administration. In the annals of veterinary medicine, they stand out like the symptoms of an ailment without specific direction for its cure. Veterinarians defending their ancient calling misjudged the congressional intention while agriculture groped for the right *modus operandi* to

cure the ailment. Unguided by specific directives, to cite an outstanding example, some county agents of the Middlewest were urged to take on the vaccination of hogs against cholera as their main duty and, ergo, to teach farmers how to dispense with the local veterinarian's service; and a vast system of providing farmers with veterinary supplies was developed. Demonstrating the technique of hog-cholera vaccination and furnishing the serum and other biological agents commonly used in the county were widely practiced, to the dismay of old practitioners, whose incomes declined along with respect for their profession, which was not well-enough organized to come to their aid.

The Mississippi Valley situation symbolizes the weakness of the veterinary societies in the early 1920's—postwar years—or before practitioners were gripped with the idea of maintaining a united front. The results were amazing: Practitioners were impoverished, quarreled with old clients, left for other parts, took salaried positions at low pay; the Illinois association was split in two and dues became hard to collect as no one seemed able to reëstablish sane thinking; a sound editorial, teeming with good advice and entitled "Taking the Graft out of Hog-Cholera Vaccination," was published at an unfortunate moment in *Veterinary Medicine;* John R. Mohler was voted out of editorship of the JOURNAL*; and the issue gave birth to *The North American Veterinarian,* there being hope that the new journal would come to the rescue.

One more heave, as Winston Churchill says. These facts are related in connection with the subject to prove that the issue was not, and is not now, a local one. In the interest of the country, the liberal appropriations which the Congress has made in support of science in agriculture do not mean that veterinary science on the farms should not be applied exclusively by graduates of the veterinary colleges. Living in a period of specialized education, there can be no greater plank in the profession's platform. It is, therefore, gratifying to see local veterinarians and county agents working hand-in-hand, states employing extension veterinarians of the upper brackets, and a sharper line of demarcation being drawn between the duties to be allocated to each group. The trend is up but the speed is slow.

*The failure to reëlect John R. Mohler (then chief of the Bureau) as editor of the JOURNAL at the St. Louis meeting (1922) was caused by a whispering campaign, based on the false assumption that farmer vaccination of hogs was advocated by the BAI.

Victory

An editorial in *The Veterinary Journal* (June, 1945) under this title discusses some of the accomplishments of agriculture in Great Britain, and the probabilities for the future. The closing paragraph seems particularly applicable here also:

"Now in this metamorphosis the veterinary surgeon has a great part to play. To him, the breeder will look for advice and guidance, no matter if the animal be horse, ox, pig, sheep, dog, or even cat. Here is our opportunity. Let us seize it and so render our greatest service to our country and, incidentally, to ourselves, for our usefulness, our future, and our prosperity are bound indissolubly with the animal world. Here is the golden opportunity; let it not pass, for it may not come our way again."

"See Your Representative"

In his mild manner of speaking, Dr. J. A. Barger, United States B.A.I. inspector in charge for Iowa, addressing the Eastern Iowa Veterinary Association at Cedar Rapids, in October, proved that great sayings can impress the mind without gesture or crescendo when he hammered home the right answer to the multiplying complaints raised against the free-for-all selling and use of strain 19. He simply put the blame where it belongs by telling the audience to "see your representative" and have the right laws governing such things written into the statutes. Though told in a soft voice, the weight of this advice is heavy, for it smokes out into the open the sordid commercial mentality that dogs the progress of livestock sanitary measures. We still live in an age when powerful agencies stoop to traffic in the health of man and

animals, and the only way to block that evil is through the force of public opinion which your representatives in national or state legislatures seldom fail to honor. All that the federal and state livestock sanitary officials can do is to enforce law and order and to keep prepared to step right in as quickly as enabling laws permit. This, we believe, every veterinarian will admit is being done. So, in this case, at least, "see your representative" is a big mouthful. Livestock farmers who are unswayed by subversive influences are champions, not opponents, of the highest type of veterinary service.

Liability Insurance for Veterinary Practitioners

A dog which had been hospitalized was released to its owner by the veterinarian. The animal bit the owner and his son. Suit was filed against the veterinarian, and damages of $140 and costs were paid.

* * *

A valuable show horse was slightly injured while in the care of a veterinarian. The owner sued because of inability to show the horse and collected $1,760 in damages.

* * *

Error in diagnosing a case was claimed by the owner of a dog. Although the alleged error was not substantiated when the case came to trial, yet it was necessary to spend $240 in legal fees to defend the case.

* * *

The foregoing are just a few examples of claims recently filed with the company which handled the cases under the liability insurance coverage which these veterinarians had through the AVMA policy. They are cited to show some of the incidents which may arise in practice — incidents which, in themselves, appear to be minor in significance but which can have serious consequences. A number of other cases, varying in importance and the costs involved, could also be recited but the point of interest is that the veterinarians concerned had the protection of comprehensive liability coverage.

Two Decades of Veterinary Insurance

It is just twenty years since AVMA liability insurance was developed with the assistance of an agency in New York. For several years prior to 1925, local and state veterinary associations, as well as individual veterinarians, had tried unsuccessfully to procure this type of coverage. Companies and agents were not interested because of the relatively small number of prospects in relation to the risks that might be involved. Finally, a policy was drawn up by Goerlich and Goerlich, of New York, and they in turn prevailed upon the United States Fidelity and Guarantee Company to underwrite it, insuring only members of the AVMA.

Under the policy, the company agrees to pay any damages assessed against each assured for professional services rendered in the practice of veterinary medicine or surgery, or which should have been rendered, by him, any assistant to him, any partner, technician, or any other person during the term of the policy, and resulting from any claim or suit charging malpractice, error, negligence, or mistake, excluding any claims or suits on account of theft of any animal, and to defend each assured without limit of cost in any suit at any time filed, within the foregoing specifications.

The company's liability to each assured for damages resulting from professional services to one animal is limited to three thousand ($3,000.00) dollars, paid in satisfaction of a judgment or in the company's settlement of a claim for damages; and subject to the foregoing, the company's total liability to each assured is limited to fifteen thousand ($15,000.00) dollars in any one year, in addition to cost of defense. The cost of this insurance protection is $17.50 for one year or $30 for two years.

During these twenty years, the number of claims per insured veterinarian has varied only from seven to nine per hundred per year. *On the average, one out of twelve insured members has a claim each year.* The size of the claim payments and the cost of defending each claim has steadily increased, however.

The claims have varied considerably: from alleged injury, death, or escape of an animal to alleged injury to persons caused by an animal treated by a veterinarian.

Veterinarians Should Be Covered

The purpose of this article is two-fold: to call the insurance to the attention of the many practicing veterinarians who are not

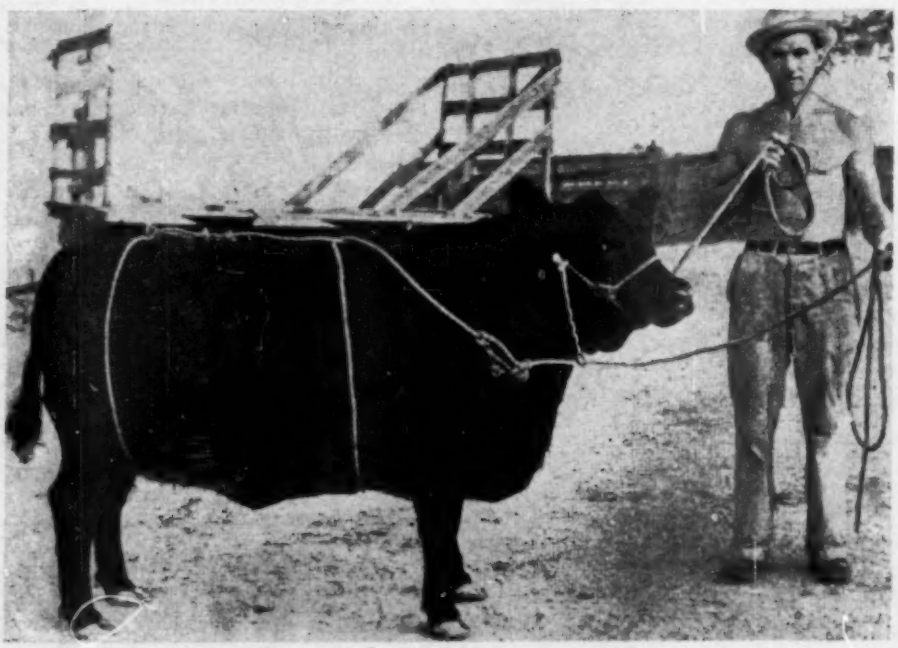
aware of its availability; and to suggest that a far larger number of veterinarians than are presently covered might well consider its desirability. The AVMA receives no benefits, financial or otherwise, from the insurance; the Association is simply the trustee of the policy and the coverage is one of the services arranged for the benefit of members. It also can be said that, in spite of the long existence of the policy, neither the agents nor the underwriting company have found it a very profitable venture; in fact, there has been some indication that the policy might be withdrawn unless a considerably larger number of policies were written.

Every year, a number of inquiries reach the AVMA office from veterinarians who want information about practice liability insurance; not infrequently, a suit has already been filed or, at least, threatened. Such "after-the-fact" cases, of course, cannot be covered by insurance acquired subsequent to the incident at issue.

It is not highly unusual nor, ordinarily, is it discrediting to a veterinarian to have a claim brought against him by a client for some alleged negligence or accident incident to professional services; professional men of all branches are liable to such things in the practice of their science. However, such claims always have a high "nuisance value" and can be troublesome if the veterinarian does not have access to expert advice and defense counsel and, sometimes, they can be very costly.

For those who may be interested in further information, it is suggested that they write to the Association's central office.

Rope Scheme for Leading Cattle

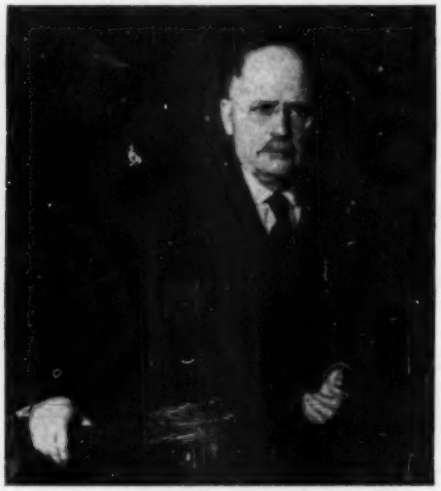


—From American Cattle Producer

Taken from old horse-training methods, the rope arrangement shown above is a speedy and practical way of breaking young cattle to lead. The rope is passed around the rear flank with the slip noose on top. A second rope is passed around the body back of the shoulders and should have a ring on top to allow free action of the lariat without putting pressure on the front quarters. From here the lariat passes through a ring in the halter. When pressure on the halter rope is not sufficient to make the animal step up, the second rope is tightened, placing the pressure on the rope around the rear flank. The lesson is soon learned that a tug on the halter rope means "move ahead."

Walter Long Williams
1856-1945

Dr. W. L. Williams, 89, Ithaca, New York, a world-renowned authority on veterinary obstetrics, died at his home on October 23, 1945. He was born near Argenta, Ill., where he grew up on a farm. He taught in a rural school for two years and then entered the Illinois Industrial



Dr. W. L. Williams

University (now the University of Illinois) in 1875. He transferred to Montreal Veterinary College where one of his professors was Dr. William Osler, from whom he received inspiration for painstaking study of the problems of reproduction and of pathology.

Selected as professor of veterinary surgery, obstetrics, zoötechnics, and jurisprudence, in 1896, when the veterinary college was established at Cornell University, Dr. Williams was made emeritus professor in 1921, but maintained his contacts with the College until the past few months. He was a prolific writer, serving as an associate editor of the *American Veterinary Review* from 1890 to 1912, editor for the United States of the *Veterinary Journal* of London from 1906 to 1908, foreign corresponding member of the *Société Centrale de Médicine Vétérinaire* of France, contributor of many articles to veterinary publications, and author of two books, "Veterinary Obstetrics," which reached a third edition and was translated into Italian as well as Spanish, and "Diseases of the Genital Organs of Domestic Animals," which has also reached a third edition and has been translated into Spanish. *Cornell Veterinarian* (July 1945) lists a bibliography of 256 titles, and calls it incomplete.

Dr. Williams was president of the Illinois State Veterinary Medical Association in 1889, of the American Veterinary Medical Association in 1893, of the New York State Veterinary Medical Society in 1906 and 1907, and was an honorary member of the Iowa Veterinary Medical Association, of the Central Veterinary Society of England, and of the Veterinary Society of Sweden.

He was a keen, sometimes a sharp, critic of his own work as well as the writings of others. Of his own work he says "Some . . . contributions contain important errors," and again, "At times I have been very undiplomatic in my writings." Of his criticism of the work of others, he says, "These criticisms I did not make with the desire to offend the parties criticised, but because I considered it my duty and did not regard the acquired hatred a legitimate reason to remain silent."

A tradition on the Cornell campus, "Uncle Billy" will be missed by his former students and by all who regularly returned for visits to Ithaca and to the annual conferences.

Buy Victory "E" Bonds

backed by the strongest and richest nation in the world — the United States of America!

Strangeways' "Veterinary Anatomy" and Finlay Dun's "Materia Medica" (ever hear of them?) are of record as the best sellers known to the veterinary educational system. What's your guess?

CURRENT LITERATURE

ABSTRACTS

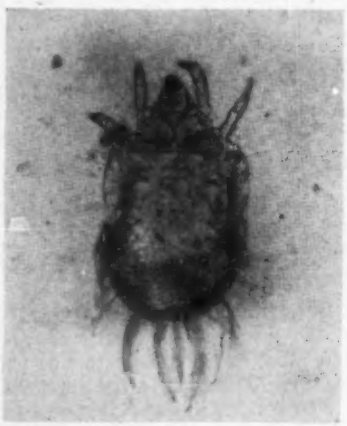
Gonadotropic Hormones in Ewes and Does

Experimental work in sheep and goats indicated that follicular growth and ovulation can be brought about with injections of gonadotropins. But, the somewhat erratic induction of estrus with ovulation and the lower percentage of conceptions in animals in which estrus has been induced or in those force-mated after induction of ovulation, than in animals bred during natural estrus was found difficult to explain.

Estrogens alone or given with gonadotropins and gonadotropins or estrogens given during the natural breeding season gave variable results. There was, however, an apparent increase in fertility as was seen in the percentages of conceptions and births. In some instances, there was no change in fertility. Further study of endocrine physiology of normal or induced estrus, of dosage, and of the time of administration that will induce estrus and ovulation in anestrous ewes and does, was advised.—[*Ralph W. Phillip, Richard M. Fraps, and Archie M. Frank, U. S. Bureau of Animal Industry, Beltsville, Md.: Hormonal Stimulation of Estrus and Ovulation in Sheep and Goats—A Review, Am. J. Vet. Res., 6, (July, 1945): 165-177.*]

Newly Found Ectoparasite of Foxes and Mink

An ectoparasite of fur-bearing animals of the Northwest that threatens to "wipe out some fur farmers financially" is described. The mite is nameless and, so far as the author knows, it has not been mentioned in government pamphlets on diseases of fur-bearing animals. It infests foxes and mink in variable degrees of severity, in the regions of the tail, back, and hind legs but may be found on other parts, and, though not yet identified elsewhere, it possibly affects other hosts. The parasite is a small, white mite the size of a particle of dandruff but cannot be truly recognized without the microscope or magnifiying glass. It does not burrow into the skin nor cause any lesions; it crawls about swiftly for so small an insect, and causes intense pruritus. It feeds and clings around the base of the hairs in countless numbers. Damage to the fur is caused by the host pulling out hairs. Small tufts of hair can be plucked from the affected areas. The mite appears to leave the host when it lays its eggs, as an abundance of eggs can be found in accumulated débris and hair in the corners and on the side walls of the



Photomicrograph of the nameless mite

pens. No eggs have ever been found on the host. The mite attacks the animals from the middle of August to December, to reappear the next year. The remedy is energetic scrubbing of the pens with a potent insecticide—a pound of lye to 15 gallons of hot water, care being taken to keep the animals out of the pens until the strength of the lye is expended. For treatment of the infested animals, dipping with the common lime-and-sulfur solution, pine oil or sheep dips, or creosote dips at the temperature of 110 F. is used. Dippings, however, are not to be regarded as entirely safe and in any event must be used carefully. Treatment without thorough decontamination is not a good procedure for getting rid of the pest.—(*Norman L. Garlick, D.V.M.: An Isolated External Parasite Causing serious Damage and Loss in Fur Pelts. The Fur Journal, 11, (Aug. 1945): 1-4, and 6.*)

Neglect of Veterinary Service in India

Complaint is made that the government of India neglects its veterinary service, pursuing a "niggardly policy toward the veterinary department in not keeping faith with professed concern over the peasants." The prosperity and

health of the people is at stake. Year after year the government has been telling the public that the activities of the veterinary department could not be expanded to the desired extent owing to lack of personnel. The field and district staffs are undermanned, educational institutions are stripped to the bone, research work is in "cold storage," and no steps are taken to attract young men into the profession. While the other colleges of the university—arts, medicine, engineering, and agriculture—are flooded with applicants for admission, the veterinary college fails to entice the requisite quota, for upon learning the truth students turn to other walks of life. "They are simply scared away," and pleas for reform are without effect. Concessions in fees and scholarships have failed to attract the intelligent young men of the country, in view of the prospects. Meanwhile, contagious diseases continue to take a heavy toll.—[*Editorial: A Serious Situation. The Indian Vet. J. 22, (July, 1945): 41-42.*]

Fluctuations in Numbers of Trichomonas Foetus

An interesting and logical theory for fluctuations in the numbers of *Trichomonas foetus* is presented along with a way to use this theory for making a diagnosis in a questionable herd.

Initial infections induced by coitus with infected bulls resulted in the appearance of *Trichomonas foetus* in the vagina approximately one week after exposure. High counts were maintained for only about ten days, but most cases were not negative until about eighty days following exposure. In these cases of initial infection there is either an early return to estrum (nineteen to thirty-two days) or development of pyometra. During the remainder of the period of infection, there was a characteristic fluctuation in numbers of Trichomonas present. They were scarce during estrum and in the early stages of the cycle but became suddenly abundant a few days before the appearance of estrum.

When Trichomonas did not appear in the vagina until several weeks or months following exposure, or when pregnancy occurred and was followed by abortion at two to five months or else proceeded uninterrupted, the authors believed that the females involved had been previously infected one or more times.

In previously uninfected females, the Trichomonas ordinarily begin to multiply in the vagina immediately following exposure, because the vagina, cervix, and uterus are susceptible to infection. This early vaginal infection induces a resistance in the vagina in the course of two or three weeks, after which time the organ no longer supports multiplication.

The infection in the uterus persists beyond that of the vagina and cervix. This is true whether initiated at the time of exposure or later as a result of an invasion of organisms from the vagina, because a longer time is required to render the uterus resistant. The occasional discharge into a resistant vagina of material from an infected uterus accounts for the periodic appearance of Trichomonas in vaginal samples in the later stages of infection.

In making a diagnosis, therefore, the veterinarian may expect that in animals exposed for the first time, Trichomonas will be found most abundantly from eight to nineteen days following such exposure. When examining animals that have been exposed one or more times previously, however, the best time to examine is two or three days before the expected appearance of estrum.

This is presented as a hypothesis by the authors, but it may serve as an excellent guide in determining how specimens of value may be selected for examination.—[*David E. Bartlett, and Datus M. Hammond, United States Department of Agriculture, Beltsville Research Center, Beltsville, Md.: Pattern of Fluctuations in Number of Trichomonas Foetus Occurring in the Bovine Vagina During Initial Infections. Am. J. Vet. Res., 6, (1945): 91-95.*]

Hog Cholera in Venezuela

Hog cholera has been spreading in Venezuela, especially in the coastal districts where pigs have been imported and where the disease has been fought with simultaneous vaccination. According to competent authorities, who believe that propagation of the disease has been favored by simultaneous vaccination, "It is noteworthy that in some places these vaccinations were performed by the breeders themselves, who were not always instructed as to the danger of the application of the live and active virus, both for healthy pigs and for those weakened by some cause. We believe that this was probably one of the factors which contributed to the spreading of the disease."

A total of 90 pigs was used in experiments with vaccines prepared from Venezuelan as well as United States virus. Vaccine prepared from native virus protected 85 per cent of the vaccinated pigs, while vaccine prepared from U. S. virus protected 95 per cent of the vaccinated pigs. This is believed to be due to a greater antigenic power of U. S. virus rather than to a plurality of viruses.

Vaccine was used in doses of 10 cc. to 15 cc.; immunity was challenged with 1cc. of virus. More immunity was conferred by the 15-cc. dose than by the 10-cc. dose. Strong immunity was sometimes noted as early as twelve days after vaccination, but a longer period was required by most pigs. It was noted that

pigs which did not absorb the vaccine well and those which developed swellings at the points of injection did not develop immunity.—[*Dr. Richard Noviky: Crystal Violet Vaccine for the Prevention of Hog Cholera in Venezuela. Bol. del Inst. de Investigaciones Veterinarias. Vol. 2, No. 8. Caracas, Venezuela.*]

Pasteurella Tularense in Sputum

Since *Pasteurella tularense* has been isolated from various organs, tissues, and body fluids, including the lungs, it was not unexpected to isolate the organism in the sputum from a case which showed pulmonary lesions *post mortem*. However, its isolation from the sputum of a person having no pulmonary involvement is interesting, since its presence in the respiratory tract need not be associated with any lung lesion. Three cases studied showed the disassociation. The examination of sputum is, therefore, recommended as a laboratory procedure in the diagnosis of the disease.—[*Carl L. Lasson, U. S. Public Health Service: Isolation of Pasteurella Tularense from Sputum. Pub: Health Rep., 60, (Sept. 7, 1945): 1049-1053.*]

"Brucellosis, an Unrecognized Menace"

A physician speaking before the seventieth annual meeting of the Oregon State Medical Society says, and we quote: "So sly and ensnaring is this disease in its progress, that the initial attack, usually misdiagnosed, is followed by months or years of varied and sundry symptoms, so irregular and nonrelated yet routinely returning, as invariably to classify the patients as neurasthenic, psychoneurotic or paranoiac."

He credits Drs. Howard Lewis and Rodger Keene with being the first to withdraw the mantle from unobserved brucellosis in the Northwest. Advancement of knowledge is traced from the discovery of the specific organism of undulant fever by Bruce in 1887, on the Island of Malta, to the isolation of *Brucella abortus* in cattle affected with contagious abortion by Bang in 1897, in Denmark, and to the work of Alice Evans, Giltner, Traum, Huddleson, and others in this country. Long regarded as an economic problem of the dairyman, it has more recently been accorded recognition as a human health problem. Quoting: "A very conservative estimate concedes the prevalence of brucellosis in from 10 to 15 per cent of the American population."

Chronic brucellosis is preceded by a prodromal period of fatigue, mental inertia, marked exhaustion, extreme temperature, headaches, muscular aches, anorexia, abdominal and pelvic distress, and generalized stiffness. Quoting again: "Additional findings often evident are palpable spleen, dry or mildly productive cough, diarrhea or constipation, nausea, sore throat, distention, epigastric pain, mental confusion, hypotension, depression, insomnia, adenitis, salivary adenitis, dermatitis, edema, meningeal irritation, pyelitis, cholecystitis, colitis, cystitis, etc., etc." He mentions also profuse sweating with a peculiar musty or "mouse nest" odor.

Blood, allergic and bacteriological examinations, and chemical and biological treatments are described.

Summarizing, the author pronounces undulant fever a misnomer, since less than 10 per cent of the chronic cases have fever. He regards the disease as a major public health problem of city and country districts, that requires a closer fraternal relation between physicians and veterinarians.—[*Raymond B. Staub, M. D., Portland, Ore.: Brucellosis, an Unrecognized Menace. Northwest Med., 43, (October 1944): 274-279.*]

BOOKS AND REPORTS

Penicillin in Bovine Mastitis

The work here reported was carried out on 97 quarters known to be infected with *Streptococcus agalactiae* and 61 additional quarters infected with *Staphylococcus aureus*. Information presently available does not permit a recommendation of minimum dosage or length of time necessary to eliminate the infection from a quarter, because there is some variation from one quarter to another; also a marked difference in response to the penicillin injections is revealed between quarters infected with *Str. agalactiae* and those infected with *S. aureus*.

Satisfactory results may be expected when 100,000 units of penicillin are dissolved in 250 cc. of sterile, distilled water and administered in five separate injections of 50 cc. (20,000 units) each immediately after each of five successive milkings.

The material is not irritant to the tissues, so that the treatment may be used on lactating or dry cows and in acute, chronic, or latent cases. In these trials, it was indicated that efficiency of the treatment is increased when given to the dry udder, especially in the case of staphylococcic infections. It was also indicated that reducing the dosage to 10,000 units per injection may reduce the efficiency, and that when cows are milking more than 50 lb. per day it may be advisable to use 50,000 units per injection because of the greater dilution.—[*O. W. Schalm, Department of Veterinary Science, University of California, Berkeley, and N. H. Casselberry, Cutter Laboratories, Berke-*

ley, Calif.: Recommendations for the Use of Penicillin in the Treatment of Bovine Mastitis. Mimeograph.]

Embryology and Teratology

Notice of the printing of this book has been furnished. Printed in two parts, it traces the development of normal embryos and of monsters. Compendio de Embriología I, Compendio de Teratologia II. Luis Van de Pas. 151 pages, illustrated. Facultad de Agronomía y Veterinaria, Buenos Aires, 1944.

Breeding and Rearing of Purebred Swine

Tracing the history of the pure breeds of swine in Europe to their environment in the United States and from there to Puerto Rico, this bulletin details the results of breeding programs conducted under the Puerto Rico Reconstruction Administration, a branch of the United States Department of the Interior. Tables and charts furnish an accurate, factual account of results secured.—[*Jaime Bagué, V. M. D.: Breeding and Rearing of Purebred Swine. Paper 127 pages, illustrated. Bureau of Supplies, Printing, and Transportation, Department of Agriculture and Commerce, San Juan, Puerto Rico.*]

Livestock Sanitary and Loss Prevention Board Report

Besides the ever timely emphasis on the importance of preventing losses from disease, pests, and rough handling, the report contains useful abattoir statistics on the tremendous losses livestock farmers suffer continuously from these preventable causes, particularly tuberculosis, swine erysipelas, beef-liver abscesses, cattle grubs, and losses in transit. The grub-control projects in two Colorado townships, under the direction of Dr. H. E. Kemper of Dr. Benj. Schwartz's staff, Zoölogical Division of the U. S. Bureau of Animal Industry, are pointed out as the first trials of mass grub eradication on the area basis.

Direction for the handling of grubby range cattle is given, and experiences in Kansas, Idaho, Wyoming, Iowa, Oklahoma, Texas, Colorado, and Nebraska are described as to methods pursued and magnitude of the undertaking. On the whole, excellent progress is being made in controlling the heel-fly pest by the dusting, spraying, and dipping methods. The formulas recommended are described in the November JOURNAL (page 303).—[*Eradication and Control of Livestock Disease, Prevention, and Losses Incident to Marketing Livestock, annual report of the Livestock Sanitary and Loss Prevention Board of Omaha. Edited by Dr. W. T. Spencer, livestock commissioner. (February, 1945).*]

Pictorial History of the Second World War

This set of books—3 volumes and 1 to come—is a chronological history of World War II told by means of on-the-spot, action pictures, with graphic headlines and short legends. It covers the period from the war's startling beginning to its climactic finish. The pictures—one, two, or more on a page and some two-page spreads—are an assemblage of official snapshots released by the air, land, and sea forces and by independent news agencies of the different countries involved. The first three volumes contain 1,536 pages, 14 by 10. Volume IV (500 pages) is in press. It would require many similar-sized volumes of the written word to describe as much detail as these pictures portray.

Unconsciously, the cameraman caught horses, mules, dogs, and camels taking part in the gargantuan conflict, along with jeeps, trucks, and tanks. Veterinarians have already been told of the many horses used in major operations by the Russian forces, but less has been currently reported in pictorial form about the K-9 Corps in the Burma and New Guinea campaigns. A glimpse at these books tells the story of our first military dog service.

Recalling the part played by France in the surrender of Cornwallis in 1781, the pictures of the American doughboys marching down the historic Champs Elysées, where their dads marched triumphantly in 1918, seem to belong among the most thrilling climaxes of United States history.

The stirring events and the strategy of the passing show, from Pearl Harbor to Berlin and Hiroshima, pictorially delineating troops, warships, and airplanes in modern combat, make up a grouping of book material that is not likely to gather dust on the shelf in the years to come, for the five-year period of the global war that these action pictures portray stands apart as a warning to a world lunging on to who knows where.—[*Pictorial History of the Second World War, Volumes I, II, III, and IV. Published by Wise & Company, Inc., 50 West 47th Street, New York 19, N. Y. 2,000 pages all illustrated. Price: cloth, $3.00 per volume; deluxe binding, $4.00.*]

Dog Sentiment Post Cards.—A set of 16 titles in a series of post cards, including some of the oldtime favorites.—[*Dog Sentiment Post Cards. $1 per set, individual cards 10 cents. Judy Publishing Co. 3323 Michigan Blvd., Chicago 16, Ill.*]

THE NEWS

General Kelser Speaks

Brigadier General Raymond A. Kelser, director of the Veterinary Division, Office of The Surgeon General, United States Army, spoke on a nationwide radio network on the evening of Tuesday, Nov. 13, 1945. This was one of a series of programs, entitled "The Doctors Talk It Over", sponsored by the American Cyanamid Company over the American Broadcasting Company weekly on Tuesday evenings.

In this talk, entitled "Veterinary Medicine in Relation to Human Disease," General Kelser emphasized the relationship of veterinary research to human health, the contributions of veterinarians in combating specific human diseases, and the importance of diseases of animals transmissible to man. He also told how the Veterinary Corps functioned to protect the health of the military forces by food inspection and sanitary control, and he gave a clear picture of the success which attended these efforts.

The plea for a close alliance between veterinary medicine and human medicine was clearly stated, and a need for such coördination was amply substantiated.

Look Magazine Features "Animal Doctor"

The Dec. 11, 1945, issue of *Look Magazine* carries a pictorial story of a day in the life of an "animal doctor." Dr. Thomas H. Ferguson, Lake Geneva, Wis., is portrayed in scenes which illustrate the varied functions of the veterinarian.

There are five views showing several stages in a cesarean section on a first-calf Jersey heifer, using the operating table in his hospital. There are also hospital views of two dogs, one with an ear ailment that is under treatment, the other presenting a dental problem.

Farm scenes include: an udder injection for mastitis, a stethoscopic examination for respiratory trouble in a calf, the use of the stomach tube in a bloated cow, the lancing of a strangles abscess in a colt, field treatment of a cow striken with parturient paresis, the method of collecting a blood sample for brucellosis test, and a general physical check-up of a calf.

The surgical procedures are well presented as to restraint, aseptic and antisepitc precautions, and the necessity for using a variety of instruments and methods during the course of the day. The subject of each picture was properly lighted and correctly focussed to show the work that was being done, and Dr. Ferguson's display of versatility is excellent.

1946 Meeting in Boston

The 1946 annual meeting of the AVMA will be held in Boston during August, in accordance with a vote of the Board of Governors at its meeting in Chicago on Dec. 1, 1945. The Board of Governors was authorized to select the 1946 meeting place by the House of Representatives at its meeting last August. The Hotel Statler will be convention headquarters, and members are urged to make their reservations early.

The exact dates, the duration of the meeting, and the general plan have not yet been determined but will be announced in the near future.

Can You Help Locate These Members?

Beddow, Ralph N., 3228 Esther St., Honolulu 40, Hawaii.

Berdan, L. N., APO 21086—c/o P.M., San Francisco, Calif.

Brekke, A. F., Service Unit 1699, Chicago 6, Ill.

Bridges, Burlin C., 2nd Army Hdqs., Office of Surgeon, Memphis, Tenn.

Chambers, J. W. Jr., 111 E. Woodin, Dallas, Texas.

Collins, Elizabeth J., 25 W. 68th St., New York 23, N. Y.

Collins, H. R. Jr., Air Corps Base Flying Schl., San Angelo, Texas.

Collinson, R. L., Aurora, Mo.

Covington, N. G., Box 283, Pullman, Wash.

Cox, Erston S., Blountsville, Ala.

Crippen, Donald A., 1312 Willard, Houston, Texas.

Cross, James L., Box 579, Levelland, Texas.

Dale, H. E., Guthrie Center, Iowa.

Davis, Sanford E., 378 E. Elwood, Stayton, Ore.

Devine, K. D., OT B67 MFSS, Carlisle Barracks, Pa.

Elmer, Everett K., D. Co. 2nd Bn., Camp Wheeler, Ga.

Flanigan, Jean A., U. S. Joint Purchasing Bd., FPO 113—c/o P.M., San Francisco, Calif.

Ford, Duane F., 710 E. Mansion St., Marshall, Mich.

ley, Calif.: Recommendations for the Use of Penicillin in the Treatment of Bovine Mastitis. Mimeograph.]

Embryology and Teratology

Notice of the printing of this book has been furnished. Printed in two parts, it traces the development of normal embryos and of monsters. Compendio de Embriología I, Compendio de Teratologia II. Luis Van de Pas. 151 pages, illustrated. Facultad de Agronomía y Veterinaria, Buenos Aires, 1944.

Breeding and Rearing of Purebred Swine

Tracing the history of the pure breeds of swine in Europe to their environment in the United States and from there to Puerto Rico, this bulletin details the results of breeding programs conducted under the Puerto Rico Reconstruction Administration, a branch of the United States Department of the Interior. Tables and charts furnish an accurate, factual account of results secured.—[*Jaime Bagué, V. M. D.: Breeding and Rearing of Purebred Swine. Paper 127 pages, illustrated. Bureau of Supplies, Printing, and Transportation, Department of Agriculture and Commerce, San Juan, Puerto Rico.*]

Livestock Sanitary and Loss Prevention Board Report

Besides the ever timely emphasis on the importance of preventing losses from disease, pests, and rough handling, the report contains useful abattoir statistics on the tremendous losses livestock farmers suffer continuously from these preventable causes, particularly tuberculosis, swine erysipelas, beef-liver abscesses, cattle grubs, and losses in transit. The grub-control projects in two Colorado townships, under the direction of Dr. H. E. Kemper of Dr. Benj. Schwartz's staff, Zoölogical Division of the U. S. Bureau of Animal Industry, are pointed out as the first trials of mass grub eradication on the area basis.

Direction for the handling of grubby range cattle is given, and experiences in Kansas, Idaho, Wyoming, Iowa, Oklahoma, Texas, Colorado, and Nebraska are described as to methods pursued and magnitude of the undertaking. On the whole, excellent progress is being made in controlling the heel-fly pest by the dusting, spraying, and dipping methods. The formulas recommended are described in the November JOURNAL (page 303).—[*Eradication and Control of Livestock Disease, Prevention, and Losses Incident to Marketing Livestock, annual report of the Livestock Sanitary and Loss Prevention Board of Omaha. Edited by Dr. W. T. Spencer, livestock commissioner. (February, 1945).*]

Pictorial History of the Second World War

This set of books—3 volumes and 1 to come—is a chronological history of World War II told by means of on-the-spot, action pictures, with graphic headlines and short legends. It covers the period from the war's startling beginning to its climactic finish. The pictures—one, two, or more on a page and some two-page spreads—are an assemblage of official snapshots released by the air, land, and sea forces and by independent news agencies of the different countries involved. The first three volumes contain 1,536 pages, 14 by 10. Volume IV (500 pages) is in press. It would require many similar-sized volumes of the written word to describe as much detail as these pictures portray.

Unconsciously, the cameraman caught horses, mules, dogs, and camels taking part in the gargantuan conflict, along with jeeps, trucks, and tanks. Veterinarians have already been told of the many horses used in major operations by the Russian forces, but less has been currently reported in pictorial form about the K-9 Corps in the Burma and New Guinea campaigns. A glimpse at these books tells the story of our first military dog service.

Recalling the part played by France in the surrender of Cornwallis in 1781, the pictures of the American doughboys marching down the historic Champs Elysées, where their dads marched triumphantly in 1918, seem to belong among the most thrilling climaxes of United States history.

The stirring events and the strategy of the passing show, from Pearl Harbor to Berlin and Hiroshima, pictorially delineating troops, warships, and airplanes in modern combat, make up a grouping of book material that is not likely to gather dust on the shelf in the years to come, for the five-year period of the global war that these action pictures portray stands apart as a warning to a world lunging on to who knows where.—[*Pictorial History of the Second World War, Volumes I, II, III, and IV. Published by Wise & Company, Inc., 50 West 47th Street, New York 19, N. Y. 2,000 pages all illustrated. Price: cloth, $3.00 per volume; deluxe binding, $4.00.*]

Dog Sentiment Post Cards.—A set of 16 titles in a series of post cards, including some of the oldtime favorites.—[*Dog Sentiment Post Cards. $1 per set, individual cards 10 cents. Judy Publishing Co. 3323 Michigan Blvd., Chicago 16, Ill.*]

THE NEWS

General Kelser Speaks

Brigadier General Raymond A. Kelser, director of the Veterinary Division, Office of The Surgeon General, United States Army, spoke on a nationwide radio network on the evening of Tuesday, Nov. 13, 1945. This was one of a series of programs, entitled "The Doctors Talk It Over", sponsored by the American Cyanamid Company over the American Broadcasting Company weekly on Tuesday evenings.

In this talk, entitled "Veterinary Medicine in Relation to Human Disease," General Kelser emphasized the relationship of veterinary research to human health, the contributions of veterinarians in combating specific human diseases, and the importance of diseases of animals transmissible to man. He also told how the Veterinary Corps functioned to protect the health of the military forces by food inspection and sanitary control, and he gave a clear picture of the success which attended these efforts.

The plea for a close alliance between veterinary medicine and human medicine was clearly stated, and a need for such coördination was amply substantiated.

Look Magazine Features "Animal Doctor"

The Dec. 11, 1945, issue of *Look Magazine* carries a pictorial story of a day in the life of an "animal doctor." Dr. Thomas H. Ferguson, Lake Geneva, Wis., is portrayed in scenes which illustrate the varied functions of the veterinarian.

There are five views showing several stages in a cesarean section on a first-calf Jersey heifer, using the operating table in his hospital. There are also hospital views of two dogs, one with an ear ailment that is under treatment, the other presenting a dental problem.

Farm scenes include: an udder injection for mastitis, a stethoscopic examination for respiratory trouble in a calf, the use of the stomach tube in a bloated cow, the lancing of a strangles abscess in a colt, field treatment of a cow striken with parturient paresis, the method of collecting a blood sample for brucellosis test, and a general physical check-up of a calf.

The surgical procedures are well presented as to restraint, aseptic and antisepitc precautions, and the necessity for using a variety of instruments and methods during the course of the day. The subject of each picture was properly lighted and correctly focussed to show the work that was being done, and Dr. Ferguson's display of versatility is excellent.

1946 Meeting in Boston

The 1946 annual meeting of the AVMA will be held in Boston during August, in accordance with a vote of the Board of Governors at its meeting in Chicago on Dec. 1, 1945. The Board of Governors was authorized to select the 1946 meeting place by the House of Representatives at its meeting last August. The Hotel Statler will be convention headquarters, and members are urged to make their reservations early.

The exact dates, the duration of the meeting, and the general plan have not yet been determined but will be announced in the near future.

Can You Help Locate These Members?

Beddow, Ralph N., 3228 Esther St., Honolulu 40, Hawaii.

Berdan, L. N., APO 21086—c/o P.M., San Francisco, Calif.

Brekke, A. F., Service Unit 1699, Chicago 6, Ill.

Bridges, Burlin C., 2nd Army Hdqs., Office of Surgeon, Memphis, Tenn.

Chambers, J. W. Jr., 111 E. Woodin, Dallas, Texas.

Collins, Elizabeth J., 25 W. 68th St., New York 23, N. Y.

Collins, H. R. Jr., Air Corps Base Flying Schl., San Angelo, Texas.

Collinson, R. L., Aurora, Mo.

Covington, N. G., Box 283, Pullman, Wash.

Cox, Erston S., Blountsville, Ala.

Crippen, Donald A., 1312 Willard, Houston, Texas.

Cross, James L., Box 579, Levelland, Texas.

Dale, H. E., Guthrie Center, Iowa.

Davis, Sanford E., 378 E. Elwood, Stayton, Ore.

Devine, K. D., OT B67 MFSS, Carlisle Barracks, Pa.

Elmer, Everett K., D. Co. 2nd Bn., Camp Wheeler, Ga.

Flanigan, Jean A., U. S. Joint Purchasing Bd., FPO 113—c/o P.M., San Francisco, Calif.

Ford, Duane F., 710 E. Mansion St., Marshall, Mich.

Fretz, Warren J., 1047 Post Office Bldg., St. Paul 1, Minn.
Gafford, R. B., Casual Co. 97, APO 11358—c/o P.M., New York, N. Y.
Garrett, John P., 5834 Staley Ave., St. Louis 23, Mo.
Gillet, Veronica, c/o G. Bower, 6500 Cochite Rd., Pearock Ct., Albuquerque, N. Mex.
Greenlee, Allan M., Vet. Repl. Pool, Chicago Q.M. Depot, 1819 W. Pershing Rd., Chicago, Ill.
Henderson, F. E., 2900 W. Sixth St., Little Rock, Ark.
Howard, Jack H. Jr., Vet. Office, Repl. Pool, C.Q.M.D., 1819 W. Pershing Rd., Chicago, Ill.
Kahl, Bernard D., Hamilton, N. Y.
King, Roland, Box 193, Rigby, Idaho.
Koebel, Floyd W., Hdqs. 11th Port, C.B.S., E.T.O., APO 228, New York, N. Y.
McConn, F. J., Fayetteville, Ohio.
McMillan, Thomas, Wichita Falls, Texas.
Miller, J. J., Dept. of Agriculture, Division of Livestock Ind., Springfield, Ill.
Miller, M. W., 425 Maryland Ave., St. Louis, Mo.
Moffat, G. C., Centuria, Wis.
Morley, William J., Alexandria, La.
Morse, C. F., 155—124th Ave., San Francisco, Calif.
Morton, L. R., 285 Q.M. Ref. Co. F., Camp Lee, Va.
Mosier, Jacob E., Hoxie, Kan.
Mott, R. E., Patterson, Calif.
Moughon, William C., Box 609, El Campo, Texas.
Penwell, Park H., 68 Q.M. Base Depot, APO 228—c/o P.M., New York, N. Y.
Poppenhouse, Robert, Box 137, Freeport, Ill.
Reynolds, F. H., 1st Med. Gen. Lab., APO 519—c/o P.M., New York, N. Y.
Ricker, H. Glenn Jr., 84 Gainsborough St., Boston, Mass.
Rubenstein, Abraham M., 1251 Euclid Ave., Miami Beach 39, Fla.
Schoen, Edwin A., 1209 Covedale, Cincinnati, Ohio.
Stefanick, J. E., Class 44—48B Box 135 VAAF, Victorville, Calif.
Steinman, F. C., APO 502, 292 Refrig. Co., c/o P.M., San Francisco, Calif.
Taylor, Clarence L., Hq. Sixth Service Command, Chicago, Ill.
Thompson, Charles F., 603 22nd St., N.W., Washington 7, D. C.
Till, S. B., P. O. Box 705, LaGrange, Ga.
Vandeven, John W., Swift & Co., Alma, Mich.
Ward, Benj. F., Station Hosp., AAF, Grand Island, Neb.
Watson, E. J., 2542—33rd Ave., San Francisco, Calif.
Williams, J. M., Sqdn. M., 420th AAB Unit, Maxwell Field, Ala.
Wolfe, John, Whittenberg, Wis.
Woodward, Willis D., Pullman, Wash.
Zeldner, Joseph, 150 W. Euclid, Detroit 2, Mich.

APPLICATIONS

The listing of applicants conforms to the requirements of the administrative by-laws—Article X, Section 2.

First Listing

ARTHUR, HERBERT E.
P. O. Box 245, Auburn, Ala.
D.V.M., St. Joseph Veterinary College, 1915.
Vouchers: B. N. Lauderdale and E. E. Williams.

CAUTHEN, GEORGE E.
Wright's Mill Road, Auburn, Ala.
D.V.M., Alabama Polytechnic Institute, 1945.
Vouchers: A. B. Larsen and B. T. Simms.

COOK, FRANK B.
Box 177, Fort Deposit, Ala.
D.V.M., Alabama Polytechnic Institute, 1918.
Vouchers: B. M. Lauderdale and E. E. Williams.

DEHANEY, J. M.
88 Pine St., Mt. Holly, N. J.
D.V.M., Cornell University, 1921.
Vouchers: J. R. Porteus and J. T. McGrann.

JOHNSON, ROBERT A.
503 Montgomery St., Andalusia, Ala.
D.V.M., Alabama Polytechnic Institute, 1938.
Vouchers: I. S. McAdory and W. E. Cotton.

JONES, BENJAMIN F.
Geneva, Ala.
D.V.M., Alabama Polytechnic Institute, 1916.
Vouchers: B. N. Lauderdale and F. A. Clark.

LEE, WILKIE H.
Robertsdale, Ala.
D.V.M., Alabama Polytechnic Institute, 1939.
Vouchers: F. A. Clark and B. N. Lauderdale.

MILLER, MAURICE F.
33 Grow Ave., Montrose, Pa.
B.V.Sc., Ontario Veterinary College, 1938.
Vouchers: J. H. Beattie and D. C. Master.

MILLIGAN, JOHN G.
Marion Junction, Ala.
D.V.M., Alabama Polytechnic Institute, 1929.
Vouchers: B. N. Lauderdale and G. C. Kendall.

PARRISH, GUY M.
409 Macon Ave., Louisville, Ky.
D.V.M., Alabama Polytechnic Institute, 1925.
Vouchers: T. J. Stearns and F. M. Kearns.

SUMMERS, MARK E.
Whitehall, Wis.
D.V.M., Colorado State College, 1943.
Vouchers: A. J. Costa and F. C. Cummings.

SWINDLE, B. CONWELL
P. O. Box 377, Auburn, Ala.

D.V.M., Alabama Polytechnic Institute, 1940.
Vouchers: B. N. Lauderdale and E. E. Williams.

VOGEL, WILLIAM M.
437 Sandhurst Drive, Dayton 5, Ohio.
D.V.M., Ohio State University, 1936.
Vouchers: W. R. Hobbs and W. F. Guard.

WESLEY, JOSEPH L.
610th AAF BU Sq. F., Eglin Field, Fla.
D.V.M., Alabama Polytechnic Institute, 1936.
Vouchers: I. S. McAdory and W. E. Cotton.

Second Listing

Bailey, R. W., 234 Harrison, Trenton, Mich.
Bonner, Leon J., P. O. Box 231, Uniontown, Ala.
Brenes S., Rodrigo, El Centro Sport, San Jose, Costa Rica.
Callaway, Hugh P., Chicago Quartermaster Depot, 1819 W. Pershing Road, Chicago 9, Ill.
Carlson, Fred N., Belle Fourche, S. Dak.
Dennis, T. M., 624 Keith Ave., Anniston, Ala.
Dibbell, Charles B., 7758 East End Ave., Chicago 49, Ill.
Donahue, William F., P. O. Box 2045, Montgomery, Ala.
Farr, H. L., 1003—16th Ave., Tuscaloosa, Ala.
Freitas, E. Deane, 116 Winterville Road, New Bedford, Mass.
Gauntt, I. G., Jasper, Ala.
Goodman, Simon J., 7643 S. Euclid Ave., Chicago 49, Ill.
Harriman, Henry E., 5117 S. Dorchester Ave., Chicago, Ill.
Hoffman, Seymour, 1338 Broad St., Providence 5, R. I.
Isbell, W. J. Sr., P. O. Box 261, Langdale, Ala.
Krauss, Jack, 1842 E. St. George Ave., Linden, N. J.
Meadows, M. E., Box 28, Phenix City, Ala.
Mickle, Ross T., R.D. No. 6, Somerset, Pa.
Osborn, Lowell A., Veterinary Food Inspection Detachment, Fort Snelling, Minn.
Reid, William C., 358 Main St., Fort Erie, Ontario, Can.
Simes, D. E., 6001 E. Superior St., Duluth 4, Minn.
Smith, William C., Box 111, Louisville, Ala.
Sweeney, Howard M., Maple St., Jeffersonville, Vt.
Wilson, Don R., P. O. Box No. 122, Dothan, Ala.
Witte, Ernest J., 350 Lafayette St., New York 12, N. Y.

1945 Graduate Applicants

First Listing

The following are graduates who have recently received their veterinary degrees and who have applied for AVMA membership under the provision granted in the Administrative By-Laws to members in good standing of junior chapters. Applications from this year's senior classes not received in time for listing this month will appear in later issues. An asterisk (*) after the name of a school indicates that all of this year's graduates have made application for membership.

Alabama Polytechnic Institute

HAYMAN, WILLIAM P. JR., D.V.M.
Box 711, Bartow, Fla.
Vouchers: F. P. Woolf and E. S. Winters.

ROBINSON, LEON K., D.V.M.
Rt. No. 1, Box 66, Decatur, Ala.
Vouchers: F. P. Woolf and I. S. McAdory.

Colorado A. & M. College

COLLINSON, ROGER W., D.V.M.
707 York Rd., Towson, Md.
Vouchers: J. Farquharson and V. D. Stauffer.

Ontario Veterinary College

FRANK, JULIUS F., B.V.Sc.
Macdonald College P. O., Quebec, Can.
Vouchers: W. E. Swales and W. B. Durrell.

Texas A. & M. College

DILL, CLINTON P., D.V.M.
Box 191, Borger, Texas.
Vouchers: A. A. Lenert and F. P. Jaggi, Jr.

Second Listing

Cornell University

Abbott, George W., D.V.M., 6 Old Brook Dr., Worcester, Mass.
Bartle, Francis G., D.V.M., Montgomery, N. Y.
Bower, Stanton E., D.V.M., 119 E. South St., Corry, Pa.
Bush, Neill E., D.V.M., 420 Eddy St., Ithaca, N. Y.
Cummings, Harold J., D.V.M., R.D. No. 1, Averill Park, N. Y.
Dimon, Myron L., D.V.M., R.F.D. No. 1, Parish, N. Y.
Dubin, Theodore, D.V.M., 336 West End Ave., New York, N. Y.
Fox, Francis H., D.V.M., East Main St., Clifton Springs, N. Y.
Goebel, John D., D.V.M., Congress Road, New City, N. Y.
Goode, George A., D.V.M., Box 140, King's Park, L. I., N. Y.
Hartenstein, Chester, D.V.M., 406 Stewart Ave., Ithaca, N. Y.
Herlitz, George H., D.V.M., 239 Linden Ave., Ithaca, N. Y.
Horton, Robert E., D.V.M., Lodi, N. Y.
Kandl, John F., D.V.M., 309 E. 85th St., New York, N. Y.
Klein, Walter M., D.V.M., 1558 38th St., Brooklyn, N. Y.

MacCallum, Alexander D., D.V.M., New York State Veterinary College, Ithaca, N. Y.
McBee, John A., D.V.M., Freeville, N. Y.
Marshak, Robert R., D.V.M., 114 Eddy St., Ithaca, N. Y.
Mellon, Ward E., D.V.M., 82 Main St., Camden, N. Y.
Palmiter, Richard L., D.V.M., 74 Ballantyne Brae, Utica, N. Y.
Ross, Michael, D.V.M., 208 Delaware Ave., Ithaca, N. Y.
Seader, Saul B., D.V.M., 1231 Sage St., Far Rockaway, N. Y.
Shigley, Robert F., D.V.M., 322 S. Burrowes St., State College, Pa.
Smith, Harry N., D.V.M., R. D. No. 2, Neptune, N. J.
Smithcors, J. Frederick, D.V.M., Elmer, N. J.
Van Gelder, Richard, D.V.M., Bath, N. Y.
Vetter, Roland F., D.V.M., 2406 University Ave., New York, N. Y.
Wallace, Carl N., D.V.M., Wheeler, N. Y.
Watts, Minor F., D.V.M., Sunrise Highway, Bluepoint, N. Y.
Wheat, John D., D.V.M., New York State Veterinary College, Ithaca, N. Y.

Iowa State University

Chudomelka, Thomas C., D.V.M., Clarkson, Neb.
Innes, John L., D.V.M., Monona, Iowa.
Klofanda, Royal E., D.V.M., 210 Reed St., Chilton, Wis.
Lewis, R. Vaughn, D.V.M., Cambria, Iowa.
McCone, Allen C., D.V.M., Manilla, Iowa.
Magnusson, Arthur B., D.V.M., Wyoming Hereford Ranch, Cheyenne, Wyo.
Mowbray, D. C., D.V.M., Grundy Center, Iowa.
Murphy, Arch J., D.V.M., Winthrop, Iowa.
Paulson, V. Carroll, D.V.M., St. Ansgor, Iowa.
Scott, Lyle Jr., D.V.M., 308 Clay St., Woodstock, Ill.
Thieleke, Vernon A., D.V.M., Cleveland, Wis.

Michigan State College

Erkel, Ralph L., D.V.M., 214 Charles, East Lansing, Mich.
Freeland, Wright C., D.V.M., Veterinary Hosp., Rantoul, Ill.
Storey, Richard W., D.V.M., 335 S. Lake Ave., Spring Lake, Mich.

University of Pennsylvania

Gordeuk, Stephen Jr., V.M.D., The Pennsylvania State College, State College, Pa.

Texas A. & M. College

Carroll, Thelston B., D.V.M., Box 91, Ardmore, Okla.
Dugan, George T., D.V.M., P. O. Box 1888, College Station, Texas.
Kidd, Robert J., D.V.M., Box 291, Colorado City, Texas.
Law, Samuel W., D.V.M., Box 1902, College Station, Texas.
Moyle, Alton I., D.V.M., P. O. Box 33, Big Bend, Wis.
Thompson, Charles A., D.V.M., Dalhart, Texas.

AMONG THE STATES

Arkansas

Livestock Fairs.—Almost every county in the state will have a livestock fair this year, according to a letter from Dr. Frank Hurlbut, Yellville. Several clippings from the *Arkansas Gazette* show that Dr. J. S. Campbell, state veterinarian, is taking an active part in promoting and supervising these events, along with other members of the Greater Little Rock Chamber of Commerce.

California

Sacramento Valley Association.—On Sept. 28, 1945, the Sacramento Valley Veterinary Medical Association completed its organization with the election of Dr. H. W. C. Lichtenwalter, *president;* Dr. H. V. Sucher, *vice president;* and Dr. C. C. Warkentin, *secretary.* The first program meeting was held on October 26, when Dr. George H. Hart presented a paper on "The Present Status of the Veterinary Profession."

s/C. C. WARKENTIN, *Secretary.*

• • •

Dicumarol Research Recognized.—"Because two midwestern veterinarians wondered, more than twenty years ago, why cows were bleeding to death, the medical profession now stands equipped with a new drug," begins an item in a San Francisco paper. Neither the paper nor the sender of the clipping was identified.

• • •

Personal.—Fred W. Lorenz, assistant professor of poultry husbandry, University of California, Davis, has joined the research staff of White Laboratories, Inc., Newark, N. J., to take charge of research in physiology and endocrinology.

Connecticut

Quarterly Meeting.—The Connecticut Veterinary Medical Association held its regular quarterly meeting at Waterbury on Nov. 7, 1945. In addition to a business meeting and a luncheon, the technical program included the sound film, "The Science of Milk Production," by Dr. W. E. Petersen (Purina Mills film) and a paper by Dr. Richard T. Gilyard, entitled "The Rehabilitation of Army Veterinarians."

The next meeting will be held Feb. 6, 1946, at Bond Hotel, Hartford.

s/GEO. E. CORWIN, *Secretary.*

District of Columbia

Tighten Transport Law.—The Federation of Animal Welfare Societies of the District, Maryland, Virginia, and West Virginia indorsed legislation to include transportation of livestock by trucks in the "28-hour law," which provides for rest periods for animals during transport. This law was called "cumbersome" and it remains substantially as it was written in 1873.

Florida

New Officers.—At the regular meeting of the Florida Veterinary Medical Association, on October 29 and 30, the following officers were elected: Dr. M. W. Emmel, *president;* Dr. K. R. Owens, *vice-president;* Dr. V. L. Bruns, *secretary-treasurer.*

A feature of the meeting not mentioned last month was a dinner for all former Alabama Polytechnic Institute students in honor of Dr. B. T. Simms, chief of the Bureau of Animal Industry.

s/V. L. BRUNS, *Secretary.*

• • •

Personal.—Capt. Jay N. Thomas, V. C. (A.P.I., '37), of Fort Pierce, is now the division veterinarian for A. T. C., stationed at Calcutta, India. He has replaced Major D. P. Dodd, of St. Louis, Mo.

Illinois

Mississippi Valley Association.—The fortieth annual meeting of the Mississippi Valley Veterinary Medical Association was held at the Hotel Custer in Galesburg, Nov. 16-17, 1945. The speakers from out of the state were Dr. M. A. Emmerson, professor of veterinary obstetrics, Iowa State College, Ames; Dr. P. V. Neuzil, specialist in poultry practice, Blairstown, Iowa; Dr. H. C. Smith, pathologist, Allied Laboratories, Sioux City, Iowa; Dr. L. M. Hutchings, associate pathologist, Purdue University, Lafayette, Ind.; and Dr. H. E. Pinkerton, Fort Dodge Laboratories, Fort Dodge, Iowa.

The Illinois speakers were President O. G. Martens, Avon; Dr. J. V. Lacroix, president of the Illinois State Association, Chicago; State Veterinarian C. E. Fidler, Springfield; Dr. Jesse Sampson, head of Veterinary Physiology and Pharmacology, University of Illinois; Dr. C. R. Collins, Dixon; Dr. A. G. Misener, Chicago; and Dr. C. C. Hastings, secretary, Illinois State Association.—*From the program.*

• • •

Diagnostic Laboratory.—During the year completed June 30, 1945, the diagnostic laboratory of the Department of Animal Pathology and Hygiene, College of Agriculture, University of Illinois, examined 11,991 blood samples from cows for brucellosis, 4,641 blood samples from pigs for brucellosis, 59,202 blood samples from turkeys for pullorum, and 38,604 milk samples for mastitis, in addition to the routine autopsy and culture of 1,854 animal carcasses. The department staff consists of seven specially trained veterinarians.

• • •

Apparently New Pneumonia Virus.—Zichis and Shaughnessy, Division of Laboratories, Illinois State Health Department, Chicago (*Science*, Sept. 21, 1945) described two fatal cases (human) of pneumonia differing immunologically from psitticosis, ornithosis, and meningopulmonitis viruses. No contact with birds could be established.

The public press, aroused over the pigeon nuisance, quoted these research men as pinning the blame for these and other cases of virus pneumonia on the pigeon flocks, and thus started a somewhat peremptory demand for their extermination, whereupon Dr. Morris Fishbein, of the American Medical Association, came to the rescue of the pigeons and closed the argument. The virus-carrying habit of birds, including Columbidae, however leaves the problem wide open for future observation.

• • •

Chicago Association.—Confusion over the contradictory rumors afloat on the use of penicillin was cleared up by Dr. E. E. Sweebe, Abbott Laboratories, who stepped into the monthly meeting held at the Palmer House, November 13, and brought the therapeutics of the "wonder drug" up to date in a paper titled "Penicillin, Its Application and Uses."

• • •

Peoria Editor Wins.—For the best editorial on a dog topic during National Dog Week, Mr. G. W. Barrette, editor of the *Peoria Journal-Transcript*, was awarded a $100 victory bond.

• • •

Cholera in Turkeys.—The Animal Pathology Department, University of Illinois, reported in November that fowl cholera (*Pasteurella avicida* infection) was causing heavy losses in turkeys and described briefly the cause, symptoms, diagnosis, and prevention in the fall issue of *Animal Pathology Exchange*. Laboratory confirmation of the diagnosis is advised.

• • •

The Chicago Horse Show.—The horse show held at the old Coliseum in November, in honor of the American Legion, was a gala postwar event that drew big crowds to every evening performance — average 6,000. There were well-filled entries from many states,—New York, Virginia, Texas, Missouri, Wisconsin, Kentucky, Illinois—cheering crowds, conventional rustling silk, spike tails ,and top hats, superb appointments, and brilliant horseman-

ship in each of the eight classes (hunters, heavy harness horses and roadsters, saddle horses, ponies, and four-in-hands), recalling 1900, when the Chicago Horse Show dedicated the new Coliseum at 15th and Wabash Ave. with all the splendor of an Olympian holiday at the Colosseum in Rome. We saw all this repeated in 1945-31 riders in a hunter contest, and 16 drivers in the arena for a light harness event. It was thrilling to see the Hickory Creek Farm over in McHenry County capture the $2,000 stallion stake with Colonel Sport—about the finest piece of horse flesh ever shown, and to watch dashing Miss Jean McLean, of Virginia, pilot her Edith Fable to win the big stake for three-gaited saddle horses. But, this is not the place for details. The object here is to repeat that horses and their glamour still hold their place in the best society. Thanks to the American Legion for the reminder. As the sport of kings, for sport's sake, pick the horse show, emblem of he-men and praise worthy women, of wealth and frugality, of clean sportsmanship, and of wholesome family life. The horse show can't be rubbed out because of its dash and fullness and its untainted reputation.

Indiana

Walter F. Smith (C.V.C., '18), 50, prominent Indiana practitioner, died at his home in Valparaiso, Aug. 6, 1945. Dr. Smith was a familiar figure at association meetings and will be remembered for his ambitious work at surgical clinics of the national and local associations. Although certainly as busy as any veterinarian, he always found time to take active part in association work, and he will be missed by a host of personal admirers for his cheerful personality and ability as a surgeon and general practitioner. He is survived by his widow and his brother, C. Harvey Smith, an equally well-known veterinarian of Crown Point, Ind. Few have done more with as little fanfare as the Smith boys of the region skirting Chicago to the southeast.

• • •

Personal.—Dr. R. E. Nichols has resumed his duties in the Department of Veterinary Science, Purdue University, after spending three years in the Veterinary Corps. At the time of his release, he was a captain, stationed at the Army Medical Center, Washington, D. C.

s/C. R. DONHAM.

Iowa

Hog Cholera in Eastern Iowa.—The Advisory Committee of the Eastern Iowa Association released for publication Dec. 31, 1945, the statement of Federal Inspector Joe W. Giffee, Cedar Rapids, to the effect that there has been an upturn in the incidence of hog cholera, many droves having suffered heavy losses of finished hogs not protected by vaccination. The weather was favorable for the spread of swine influenza, and, quoting the Doctor, "the combination of cholera and influenza is especially hazardous in unvaccinated hogs. Protect your swine investment by timely, preventive vaccination. There is no cure for hog cholera."

• • •

Artificial Insemination.—*Wallaces Farmer* estimates that 35,000 (2.5%) of Iowa cows are artificially bred at the present time, and to that extent is a potential threat to the sale of bulls, especially of the lower price bracket.

• • •

—*From Sheep Breeder*

At an Oskaloosa sale, August 20, this ram was knocked down for $850 to Roy Warrick of that city, Carl Peters, of Panora, and Claude Seely of Algona. Ten imported Hampshire rams sold at an average price of $518.50, a record the reporter adds.

Kansas

District IV.—Dr. and Mrs. M. L. Dietrich, Newton, entertained the members of this district at their home on October 13. Dr. Chas. Webster, Garden City, described scabies in cattle and sheep; Dr. Kenneth Kimball, Wichita, discussed the duties of an officer in the Veterinary Corps; and Dr. Jack Knappenberger, Hutchinson, told some of his experiences in the Veterinary Corps and later in the Air Force.

• • •

Milk Sanitarians.—Dean R. R. Dykstra addressed the sixteenth annual milk sanitarians' school at Manhattan, October 18, using as his subject, "Educational Qualifications of a Milk Sanitarian."

• • •

Personal.—Dr. Lester W. Richardson, Fort Scott, has been appointed to the State Board of Veterinary Examiners.

Maine

Postgraduate Surgery Course.—The Maine Veterinary Medical Association devoted two full days, November 7 and 8, 1945, to a postgraduate, or refresher course, in animal surg-

ery. Dr. James Farquharson, president of the AVMA and professor of surgery at Colorado State Veterinary College, Fort Collins, conducted the course, presenting his own motion pictures—colored, black and white, and animated—commenting on the individual cases and operations as they appeared on the screen.

Massachusetts

State Meeting.—The Massachusetts Veterinary Medical Association met at Boston on November 21. The program consisted of three papers: Dr. R. R. Moulthrop, Lawrence, "Vitamin A Deficiency"; Dr. E. A. Woelffer, Melrose, "Vitamin Deficiencies in Large Animal Practice"; and Dr. T. O. Munson, Boston, "Indications for Vitamin Therapy in Small Animal Practice."

s/H. W. JAKEMAN, *Secretary.*

• • •

Personal.—Marcus M. Mason (Corn., '38) has been released from military service; he was a Major in the Veterinary Corps. With his brother, John Mason, he will engage in general practice at Worcester.

Michigan

Personal.—Dr. E. L. Krieger, Benton Harbor, is retiring from the practice which he has conducted for 43 years. He has sold his practice, hospital, and home to Dr. Geo. C. Freier (M.S.C., '43), who has just been released from

First row (top, and left to right)—Ray M. Hull, Donald F. Goetsch, Herbert M. Fisch, Arch J. Murphy, Charles A. Baird, Maurice P. Brimmer, George P. Shindel, Durward P. Marek, Orlo L. Haight, E. Paul Alexander, Miles J. McDermid, John L. Innes, Dale C. Mowbray.

Second row (left to right)—Royal E. Klofanda, Jr., Alvin O. H. Setzepfandt, Jr., Henry J. Landskron, LeRoy R. Gallentine, Vernon B. Dvorak, Arthur A. Hardin.

Third row (left to right)—Melbourne B. Teigland, Maurice S. Verplank, John V. Wand, Dr. G. R. Fowler, Dean Emeritus Chas. Murray, Dean H. D. Bergman, Dr. C. H. Covault, Keith T. Maddy, Harold E. Bain, G. Lowell Childress.

Fourth row (left to right)—Vernon A. Thieleke, Clifford R. Parrish, V. Carroll Paulson, Dr. M. A. Emmerson, Dr. H. L. Foust, Stange Memorial Clinic, Dr. E. A. Benbrook, Dr. I. A. Merchant, C. Patrick Peterson, Ralph L. Reese, Harold E. Hedlund.

Fifth row (left to right)—Harry D. McCreedy, Jr., Thomas C. Chudomelka, Lyle Scott, Jr., Paul F. Starch, Walter B. Haugo, Leland E. Bartelt, Arthur B. Magnusson, Vernon H. Marttila, James R. Arnold, Robert A. Hauser, Philip G. Eldredge, R. Vaughn Lewis, Donald E. Moore.

Sixth row (left to right)—Allen C. McCone, Orlyn G. Feuerbach, Clifford L. Syverson, Gordon W. Howe, Christian J. Peetz, Herbert M. Atkinson, Donald V. Benson, Willis M. Lawson, Jr., Floyd W. Hansmire, Richard P. Luedtke, George E. Riley, Harry L. Quick, William Einerson.

the service in the Medical Administrative Corps. Dr. Krieger graduated from Grand Rapids in 1902, and both he and Dr. Freier are members of the AVMA.

Missouri

Veterinary Short Course.—The University of Missouri presented its twenty-first annual short course for graduate veterinarians at Columbia, on November 5 and 6, 1945. Dean E. A. Trowbridge extended a welcome from the College of Agriculture; Dr. E. J. Frick, Manhattan, Kan., demonstrated methods of restraint and anesthesia of small animals and later discussed digestive disturbances of cattle; Mr. L. E. Harris, Lincoln, Neb., presented the latest information on DDT and told of some of the newer therapeutic agents in venterinary medicine; Dr. R. C. Klussendorf, Chicago, spoke on nutrition and reproductive problems and again on ketosis, as well as delivering a message from the AVMA; and Dr. H. E. Curry, Jefferson City, discussed the brucellosis-control program in Missouri. Dr. H. L. Bussong, Belton, led a panel discussion on veterinary practice.

• • •

Homer Alvin Wilson (K.C.V.C., '13), 58, former state veterinarian of Missouri (1922-1935), died at the Fitzgibbon Hospital, Marshall, Mo., on Oct. 5, 1945, following an emergency operation. Prior to entering the public service, he was engaged in general practice at Malta Bend, Mo. Following his tenure in the state service, he entered the BAI and was serving as inspector in charge of swine erysipelas control in Kentucky and Missouri at the time of his last illness.

Dr. Homer Alvin Wilson

Dr. Wilson was among the first veterinary officers to go overseas during World War I. He was the senior veterinary officer of the famous 7th Field Artillery, First Division, at Montidier, where the German legions were stopped cold after their "break through" of March, 1918, one of the important operations of the war—the beginning of the end. Anyhow, as Lt. Wilson said, "that's as far as they got."

Homer, as he was affectionately called, was a lovable chap, and a fluent, entertaining speaker, who had what it takes to be convincing. His death marks the passing of another of those faithful, unassuming veterinarians of our day, whose profound devotion to his family, his friends, and his profession helped to keep veterinary medicine close to the hearts of the people.

The deceased is survived by his widow (née Fannie Lee Douglas) and a daughter, Mary Anne Wilson, social science high school teacher.

New York

New York City Association.—On Nov. 7, 1945, the members heard Dr. E. P. Leonard, Summit, N. J., discuss "Intravenous Anesthesia."

s/C. R. SCHROEDER, *Secretary.*

• • •

Cornell Refresher Course.—The first session of the Postwar Refresher Course of six weeks' duration will open on Jan. 7, 1946. Admission will be limited to ex-service men who are graduates of veterinary schools approved by the AVMA.

The basic course will consist of four weeks; the student will then devote an additional two weeks in the department or clinic of his choice. The course will be given by the regular staff members, assisted by a few special lecturers.

A registration and tuition fee of $37.50 will cover all costs of the six-week course, but the student is expected to supply books, special clothing, and supplies needed for the work. The College assumes no responsibility for meals and housing, but it is expected that these will be available.

The returning veteran will be eligible under the G.I. Bill to receive both tuition and subsistence allowance for this course, but officers on terminal leave will not be eligible for such benefits before expiration of such leave.

A maximum of 40 students will be accepted, and inquiries may be directed to Dr. H. C. Stephenson, Director of Postwar Refresher Courses, New York State Veterinary College, Cornell University, Ithaca, New York.

• • •

Radio Broadcast.—Dr. George Hopson, of the DeLaval Separator Co., New York City, was

the speaker on "The Farm Paper of the Air" program on Nov. 9, 1945,—station WGY. His subject was "Do Cows Like to be Milked?"

• • •

Honor Day Exercises at Cornell.—Presentation of prizes to members of the College of Veterinary Medicine provided an occasion for special exercises under the auspices of the Cornell Junior Chapter of the AVMA, T. J. Love ('46), president. Acting Dean M. G. Fincher presided. Dr. H. L. Gilman presented the prizes, and Dr. J. G. Hardenbergh, executive secretary of the AVMA, addressed the assembled student body on Oct. 3, 1945, in the Memorial Room of Willard Straight Hall. The following prizes were presented:

The Addison B. Merry prize for the best work in veterinary anatomy—Mary C. Hallenbeck, '47 (first) and John H. Graves, '47; The Jane Miller prize for the best work in veterinary physiology—William Kaplan '46 (first) and John R. Steele.

The following prizes were awarded to members of the October, 1945, graduating class: The Charles Gross Bondy prize for the best work in the courses in practical medicine and surgery of small animals—Harold J. Cummings (first) and Robert R. Marshak; The Anne Besse prize for the best work in medicine and clinical diagnosis—John D. Wheat (first) and Chester Hartenstein; The James Gordon Bennett prize for the students who show the greatest humaneness in handling animals, with special reference to the use of anesthesia—Alexander D. MacCallum (first) and Francis H. Fox; The Mary Louise Moore prize for the best work in bacteriology—Robert R. Marshak; The Poultry Disease prize, established by Drs. Nathan Wernicoff ('31) and Tevis Goldhaft ('35) for the best essay on a topic in the field of poultry diseases—J. Frederick Smithcors for an essay entitled, "A Patho-Genetic Approach to the Problem of Poultry Mortality"; The Alpha Psi prize for the member of the graduating class who has shown by his scholarship, character, and breadth of interest that he is best equipped to advance the standards of veterinary science—Robert F. Shigley; and the Horace K. White prize for the students whose academic records for the entire veterinary course are highest—Robert F. Shigley (first) and J. Frederick Smithcors.

North Carolina

Sectional Associations.—North Carolina has three local veterinary associations which meet monthly in the eastern, central, and western sections of the state. The Roanoke-Tar VMA (eastern) met at Rocky Mount on November 2, with 35 members present and 5 visitors from the central association.

s/J. H. BROWN, *Resident Secretary.*

Ohio

Personal.—Dr. W. L. Ingalls (O.S.U., '42), who has been assistant pathologist with the Ohio State Department of Agriculture, has resigned this position to become associate animal pathologist with the Virginia Agricultural Experiment Station, Blacksburg, Va. He assumed his new duties on Nov. 1, 1945.

Oklahoma

Veterinarian Elected Mayor.—Dr. J. C. Cummings, Cherokee, has been elected mayor by the people of his city and is now serving in that capacity.

• • •

Personal.—Capt. Richard A. Shea, V. C., was on duty with the Chinese Combat Command until March, 1945, when he was sent to Tibet and spent seven months purchasing horses in Shangri-La. During this period, he was never at an altitude less than 11,500 feet. He was awarded the Bronze Star Medal for his work. Before entering service Captain Shea practiced at Oklahoma City, after graduating from Kansas State College in 1942.

Oregon

Horses Coming Back.—Dr. V. C. Pauhlman, Puyallup, Wash., presents a page from *The Sunday Oregonian* (Nov. 11, '45) which features riding horses. The story says that there are at least 50 organized groups of pleasure horse owners in Oregon and that riding is an increasingly popular pastime.

Pennsylvania

Sixty-Third Annual Convention—The Pennsylvania State Veterinary Medical Association met at Harrisburg on Oct. 18, 1945. In addition to the reports of various officers and committee chairmen, the following program was presented.

Dr. J. W. Walker, "Penicillin in Mastitis"; Dean G. A. Dick, "Facts Pertaining to Preveterinary Education"; Dr. D. L. Coffin, "Diagnosis of Parasitism in Veterinary Practice"; Dr. E. L. Stubbs, "Newcastle Disease"; Dr. Mark Allan, "Hemoglobinuria in Cattle." All of the speakers named are on the staff of the School of Veterinary Medicine at Philadelphia. The faculty of Pennsylvania State College was represented by Dr. W. T. S. Thorp, who discussed a new development in the treatment of avian coccidiosis. Professors R. H. Olmstead and J. J. Reid spoke on artificial insemination and investigational findings on mastitis, respectively.

Out-of-state speakers and their subjects were: Dr. C. S. Bryan, East Lansing, Mich., "Control of Mastitis"; and Dr. Ellis P. Leonard, Summit, N. J., "Skeletal Traction in Fractures."

The program was rounded out with two

motion pictures, "Modern Nutrition" (E. R. Squibb and Sons) and "The Science of Milk Production" (Ralston Purina Co.), and a talk by Mr. G. R. Rettew, West Chester, entitled "Penicillin and Its Production." A fellowship dinner honoring Dr. William J. Lentz followed. A panel discussion on mastitis during the afternoon of the second day was particularly interesting and enlightening.

Officers elected for the coming year were: H. C. Kutz, Harrisburg, *president;* P. L. Rouse, Erie, *first vice-president;* J. V. McCahon, Downington, *second vice-president;* T. M. DeVries, Altoona, *third vice-president;* E. T. Booth, Philadelphia, *treasurer;* J. D. Beck, *recording secretary;* R. C. Snyder, Upper Darby, *corresponding secretary.* B. Price, West Chester; H. W. Herriott, Hershey; S. F. Scheidy, Drexel Hill; W. T. S. Thorp, State College; E. W. Pickup, Union City, are the trustees.

s/R. C. SNYDER, *Secretary.*

• • •

Veterinary Field Service.—A new type of Ambulatory Clinic, known as veterinary field service, is now functioning as a part of the veterinary curriculum. Dr. Mark W. Allam,

Media Training Station.

Media, has joined the faculty and has turned over his large animal clientele to the veterinary college. The building, which served Dr. Allam as a hospital, provides room for living quarters for Dr. Wm. Boucher who is in charge, as well as quarters for three students who go out for one week at a time, a library, study room, farmer consultation room, sterilizing room, pharmacy, and secretary's office. The faculty and students are enthusiastic about this service, which, along with the Philadelphia Field Service, are a functioning part of the department of medicine, under the direction of Dr. John D. Beck.

• • •

Kennel Operator Convicted.—The Committee on Ethics, of the Pennsylvania State Veterinary Medical Association, brought action which resulted in the conviction of Mr. F. Daley, Willow Grove, on a charge of "treating and worming" dogs at his boarding kennel. A fine of $50.00 and costs of $90.00 were assessed by the court.

s/R. C. SNYDER, *Secretary.*

• • •

Keystone Association.—The Keystone Veterinary Medical Association met at the university veterinary school on Oct. 31, 1945, to see and study some surgical demonstrations by Dr. James Mark, assistant professor of Veterinary Medicine.

s/R. C. SNYDER, *Secretary.*

Rhode Island

Better Rural Life.—That is the name given a newsy four-page monthly, published by the Extension Service, Rhode Island State College. A current issue reports the milk production of the state to have ranged from 9,500 to 10,500 qt. per month in 1944. Production for September, 1944, showed a gain of 155 per cent over October, 1934, due to increased per capita consumption of whole milk, which was 1.7 qt. per family, or 0.4 qt. per person. An interesting observation in the area surveyed was that fluid milk consumption was highest among the low-rent groups, namely, 1.8 qt. for the lowest rent group ($13.50 to $20.00 per month) to 1.5 qt. for the group paying $36.00 and up.

Tennessee

Study of Fowl Typhoid at Knoxville.—Through a grant made by Sharp and Dohme, the Department of Bacteriology, University of Tennessee, has instituted a study of sulfonamides in the control of fowl typhoid infection. Dr. D. Frank Holtman, professor of bacteriology, will direct the work.

• • •

Paralysis from Antirabies Vaccine.—A case (human) of Landry's paralysis following the last dose of antirabies treatment is reported in *Tennessee State Medical Association Journal* of July, 1945. The patient experienced no inconvenience except a "hot spell" after the second dose but developed paralysis of the arms and legs beginning three days after the last injection. Slow recovery began after three weeks under treatment of hot applications and administration of vitamins E and B_1, the former in the form of wheat germ oil. The incidence of this vaccinogenous accident, in degrees from mild to severe, is about 3 in 10,000. The author does not insist that the treatment accounts for the recovery.—*Condensed from an Abstract in J. Am. M. A., Sept. 15, 1945.*

Texas

Dallas-Fort Worth Association.—Members have again assisted in the planning and ex-

ecution of the Dairy Day Program at Irving, which was held September 27. Similar programs at other points are proposed.

• • •

Office Moved.—The office of the Texas Veterinary Bulletin has been moved to 108 N. Washington St., Bryan, in order to be nearer to the A. and M. College.

s/E. A. GRIST, *Editor.*

• • •

Junior Chapter of AVMA.—Officers elected for the coming year are: W. E. Cranshaw, Ed-couch, *president;* Dan Hightower, Eastland, *vice-president;* Ralph Ward, Houston, *president-elect;* Robert Buie, Sulphur Springs, *secretary-treasurer;* Earl Grogan, Deport, *reporter;* David Smokler, Dallas, *sergeant-at-arms.*

Faculty sponsors are Drs. R. C. Dunn, John Milliff, and R. D. Turk.

• • •

Important Diseases.—The annual report of Dr. E. A. Grist, former chief veterinarian for the Livestock Sanitary Commission, shows hog cholera to be the leading disease from the standpoint of prevalence and economic loss. Actinomycosis is a close second, internal parasites are third, and keratitis is fourth.

Washington

State Public Hospitals.—A law passed by the legislature authorizes the establishment of public hospitals in counties having less than 25,000 population, and a bill now before the Congress would authorize federal grants-in-aid to states to assist in the construction of hospital and public health centers. Nonprofit and other public hospitals would be eligible to participate in the program. The State Grange recently carried the story on its program, "Grange Reviews The News," over thirteen stations. Script of broadcast received from Dr. V. C. Pauhlman, Puyallup.

Wisconsin

Northeastern Association.—Meeting at Chilton on October 2, the members devoted the afternoon to panel discussions of several topics, and in the evening enjoyed a dinner with members of the Kiwanis Club. The popularity of the evening meeting is attested by the presence of 227 guests, and its value by the favorable comment heard from all who attended.

Mayor J. B. Diedrich opened the meeting with a welcome, and Dr. Geo. Theiler, president of the Wisconsin Veterinary Medical Association, spoke in behalf of the state group, before Dr. Royal Klofanda presented his presidential address. The scientific program was composed of four panels conducted by the following chairmen: Dr. W. Wisnicky, Fond du Lac,—mastitis; Dr. R. C. Finkle, Seymour,—nutrition; Dr. Q. Metzig, Oshkosh,—"New Drugs"; and Dr. T. L. Knapstein, Greenville,—parasites.

Officers elected for 1946: M. Hutchinson, Clintonville, *president;* E. C. Jesperson, Omro, *vice-president;* E. C. Humke, Sturgeon Bay, and Royal Klofanda, Chilton, *trustees.*

s/J. S. HEALY, *Resident-Secretary.*

• • •

Southeastern Veterinary Association.—At a meeting held November 15, at Watertown, the members enjoyed a pictorial program. Motion picture films exhibited were "Coccidiosis in Calves," "Vesicular Diseases," "Vesicular Stomatitis in Swine," and "Rickets in Calves."

s/J. O. MCCOY, *Secretary.*

Foreign

Alsace-Lorraine

Death of Jean Zundel.—The May issue of *Bulletin de L'Académie Vétérinaire* announces the death of Jean Zundel, (Stuttgart, '85), 82, early in 1945 at Mulhouse. The deceased was one of the world's foremost veterinarians, best known in America through his classical textbook on horseshoeing, which was translated by the late Dr. John Adams, professor of surgery, School of Veterinary Medicine, University of Pennsylvania, and universally used by American veterinary colleges. He held the Legion of Honor and *Merite agricole* of France, having remained loyal to France through the many years of German occupancy (1871-1919) and 1940-1944. He was born at Mulhouse and died there.

Algeria

Hog Cholera, et al.—In 1943, the incidence of hog cholera was greatly increased on account of the augmented swine production and the feeding of kitchen refuse by military formations. Salmonelloses also were more prevalent, since the raising of hogs was stepped up to remedy the food crisis. An interesting observation was that *Rickettsia suis* was found to be one of the grave complications in cholera-infected hogs. To cope with the hog-cholera situation, the Pasteur Institute produced 882,420 cc. of antiserum and 19,645 doses of hog-cholera virus.

The principal disease of dogs were leishmaniasis and rickettsiae; fowl typhoid was common, and fowl cholera rare. A comprehensive plan of fowl-pox vaccination was carried out. Salmonella abortion in horses and septicemic salmonellosis in mules, against which energetic vaccination was practiced, sums up the soliped situation.—*Report, Pasteur Institute for 1943.*

Australia

Rabbit Population Control.—Attempts to curb the wild rabbit menace, by spreading the

contagious disease myxomatosis among them by various methods, failed in field trials reported by Bull and Mules (*J. Coun. Sci. Indust. Res.*, Australia, 17, (1944): 79-93). The virus is borne by fleas of the genus Echidnophaga and certain species of mosquitoes, among them *Aëdes egypti*. In experiments conducted on enclosed ground, free of predatory animals, diseased rabbits turned loose among healthy ones exterminated some colonies, but when the experiment was carried out under natural conditions, where fox and other predatory animals were present, there was no appreciable reduction in the rabbit population. The conclusion was that myxomatosis cannot be used with any promise of success to abate the menace.

Cuba

Dr. Bernardo J. Crespo Promoted.—Director of Ganaderia (Livestock Director) is the title of the position to which Dr. Bernardo J. Crespo has recently been appointed. Dr. Crespo was long the chief of the Section of Animal Industry of the Department of Agriculture of Cuba and is well prepared to assume the greater responsibility of his new position. His intimate knowledge of veterinary medicine and his pleasing personality mark him as a man eminently suited to this task.

Dr. Crespo graduated from the University of Havana in 1910, has been a member of the Board of Organization of the Veterinary International Congresses, with offices at LaHaya, Netherlands, a delegate from Cuba to the XIII International Congress of Veterinary Medicine (London, 1930), and resident secretary of the American Veterinary Medical Association, of which he is a member.

His many friends rejoice with Dr. Crespo in this recognition of his interest and activity in veterinary medicine and look forward to even greater heights to be achieved by the application of his abilities in the larger field now open to him.

France

The Academy of Veterinary Medicine.—The veterinary whirl is normalizing. The old order has escaped the invaders, so one would deduce from the first bulletins of the Academy of Veterinary Medicine to arrive at the AVMA office since 1940. On the roll call of the April and June, 1945, issues are familiar names and some close personal friends: Bourdelle, Cocu, Lesbouyries, Lemétayer, Sominnet, Robin, Ramon, Verge, Nicolas, Césari, Drouin, Truche, and other well-known figures in veterinary science.

CITES HADLEIGH MARSH'S "PROGRESSIVE PNEUMONIA"

One is at once faced with the spirit of the Academy: The reviewing of current literature to be rejected or approved for publication, comparable to our critical Research Council, which does yeoman service for the American veterinarian. The April issue contains the report of Professor F. Lucam, of Lyon, on a disease of sheep called "*bouhite*" by the farmers of the region of Landes, which the author compares with the disease investigated by Hadleigh Marsh, of Montana, in 1923 and reported under the name of "progressive pneumonia" of adult sheep, and by G. de Kock, of South Africa, in 1929. The symptoms of the disease are whistling breathing and emaciation. In the provincial dialect "*bouhite*" signifies whistling. The mortality in affected flocks runs between 5 and 20 per cent. Verminous pneumonia and sclero-caseous bronchopneumonia were excluded in "true *bouhite*," although these were sometimes associated. The specific cause was not determined in the bacteriological study, but the author, on the basis of the particular pulmonary lesions, proposes *lymphomatose pulmonaire maligne* (malignant pulmonary lymphomatosis) as an appropriate name.

• • •

New Veterinary Journal.—*Encyclopédie Vétérinaire-Périodique* is the name of a new French publication of sizable proportion, devoted to abstracting the world's veterinary literature. The first issues (Part 1, No. 1 and 2, dated January-February, 1944, up to Part 5, No. 9 and 10, received in November) contain abstracts from British, American, German, Belgian, Russian, and French journals. Intervals between dates of abstracted material from 1940 to 1944 correspond to the period of interrupted postal service. The reviews will facilitate editorial work in this and other countries, owing to the wide coverage.

• • •

Demise of Capt. Nicolas Nieder.—Nicolas Nieder (Alfort '92), 74, prominent veterinarian of Paris, who died March 13, 1945, is cited here as a practitioner who brought honor to himself and his profession by virtue of clinical work, unaided by the glare of the functionary, because he did not desert science in serving a large clientele. He was known in the A.E.F. of the 'teen decade as a Paris practitioner of importance, who entered the veterinary service of the French Army as a first lieutenant at the beginning of the war (August, 1914) and separated from the service as a captain four years later, without whimpering over the meager advance in rank. Captain Nieder combined science with ingenuity in the practice of veterinary medicine, and had extremely nimble surgical fingers in any branch of practice (equine, canine, bovine). He wrote utilitarian articles on such things as Cheyne-Stokes respirations in pulmonary diseases and the controversial subject of the influenza complex,

about which so many confusing chapters have been written. He introduced the equine stomach tube in France and demonstrated its use before, and to the delight of, the Alfort faculty. His thesis for the doctorate degree as late as 1925 was a documentation of that procedure. On receiving high official decorations from France and from his native country, the grand duchy of Luxemburg, no one was more astonished or more appreciative than he. Captain Nieder rose to the presidency of the Academy of Veterinary Medicine in 1944, at the time France was liberated from the German yoke. That high post is a distinction not ordinarily achieved by a private practitioner. In fact, one of the reasons for writing this note is to emphasize that the way up from the field of private practice is not closed to those who appraise science, professional conscience, and friends at par value. Reading, reporting, untiring devotion to society work, and making friends was the schedule one sees in the career of this successful man.

• • •

Professor Petit Dies.—The death of Gabriel Petit (Alfort, '93), 75, announced in the April issue of *Recueil de Medécine Vétérinaire*, recalls a famous comparative pathologist who

—*From Rec. de Med. Vét.*

Professor Gabriel Petit, 1870-1945

occupied a key teaching position on the Alfort faculty for half a century and was a prominent leader in the science circles of his country—one of the founders of the International Congress of Tuberculosis, founder of the International Society of Comparative Pathology, and a foremost figure in the academies of medicine and of veterinary medicine, eminent in the fields of cancerology, radioactivity and radiumtherapy, to mention but a few of his calm but ambitious functions. His contributions to comparative pathology are too vast and numerous to relate here.

Professor Petit was a quiet, earnest, modest, hard working man and a true scientist who won the profound confidence of his intellectual contemporaries on the basis of dependable truths.

In 1916, while the Germans were at the gates of Paris, and Alfort was closed for the duration of the war, he turned his analytical mind to the writing of a book, *Les allemands et la Science* (The Germans in Science) with a foreword by President Paul Deschanel, which was a smart reparteé on the widely circulated German book titled *Manifeste des intellectuels allemands* (White Paper on German Intellectuals).—[*Annotated Abstract from Rec. de Méd. Vét., 121, (April, 1945): 98-100.*]

Great Britain

Number of Veterinarians.—The educational supplement of *The Times* (Aug. 25, 1945) gives the number of practicing veterinarians as 131 for Wales, 1,414 for England, and 357 for Scotland. A larger supply of veterinarians must be found, the correspondent from Wales declares, since "the control of disease, for example, in dairy cows cannot be properly developed as there are not enough veterinarians to do the work."

• • •

Foot-and-Mouth Disease and Swill.—A parliamentary discussion before the House of Commons on the 24 outbreaks of foot-and-mouth disease in June, July, and August (*Vet. Rec.*, September 29) attributed the origin of the majority of them to the feeding of swill from the army camps and canteens or private kitchens. The implication was that five of the outbreaks were of alien origin, two unknown, and 17 domestic.

• • •

Anti-Vivisection Society Tax-Exemption Suit.—On the grounds that the Anti-Vivisection Society is not a charitable organization as claimed, a previous ruling that it was exempt from paying income tax was reversed in a recent court action. Quoting: "The Society's efforts in the advancement of morals and education among men was far outweighed by the detriment to medical science and research and consequently to the public health which would result if the Society succeeded in achieving its object . . . that the Society so far from being for the public benefit, would be gravely injurious to the community." In short, the Court ruled that the exemption from paying income tax must be revoked.

Russia

Differentiates Psoroptes Mange Mites.—Palimpsestov [*Veterinariya*, Moscow, 21, (1944): 23-24] describes, from morphological studies, characteristics by which the larvae of the genus Psoroptes of horses, cattle, and sheep

may be classified into three distinct species and thus confirms the belief of some entomologists that these mites are not mere varieties of *Psoroptes equi*.

• • •

High Incidence of Periodic Ophthalmia.—Out of 5,000 horses on one exploitation (farm) in Crimea, 305 (6.1%) were affected with periodic ophthalmia. In other exploitations, the morbidity ran as high as 20 to 40 per cent. Of the 305, 182 were chronic cases, 96 were recurrent cases, and 27 were stricken for the first time. Hard work could not be blamed, as the disease existed among horses that were but moderately exercised. Most of the cases were among the best animals, and most of them were between 13 and 15 years old. Neither could heredity be incriminated, since among 15 cases, from 6 months to 2 years of age, only 6 were foals of affected dams, and in the 6 colts, the disease was not manifested until the age of 6 to 7 months. Examinations of newborns for iridocyclitis were negative. Dietary treatment was recommended—vitamin A and mineral salts.—*Sov. Med., 16, (1939): 64.* Abstr. *Encyc. Vét. Period.* 4, *(July-August, 1944): 237.*

COMING MEETINGS

Ohio State Veterinary Medical Association. Deshler-Wallick Hotel, Columbus, Ohio, Jan. 2-4, 1946. R. E. Rebrassier,, Ohio State University, Columbus 10, Ohio, secretary.

Oklahoma Veterinary Medical Association. Skirvin Hotel, Oklahoma City, Okla., Jan. 7-8, 1946. C. H. Fauks, 507 Cotton Exchange Bldg., Oklahoma City 2, Okla., secretary-treasurer.

University of Pennsylvania. Annual Conference for Veterinarians. School of Veterinary Medicine, 39th & Woodland Ave., Philadelphia 4, Jan. 8-9, 1946. G. A. Dick, School of Veterinary Medicine, dean.

Indiana State Veterinary Medical Association. Severin Hotel, Indianapolis, Ind., Jan. 9-11, 1946. H. A. Lidikay, Darlington, Ind., secretary.

Cornell University. Annual Conference for Veterinarians. New York State Veterinary College, Ithaca, N. Y., Jan. 9-11, 1946. M. G. Fincher, New York State Veterinary College, acting dean.

Kansas Veterinary Medical Association. Hotel Jayhawk, Topeka, Kan., Jan. 14-15, 1946. C. W. Bower, 3119 Stafford St., Topeka, Kan., secretary-treasurer.

Mississippi State Veterinary Medical Association. Hotel Edwards, Jackson, Miss., Jan. 14-15, 1946. G. D. Gates, Clarksdale, Miss., secretary.

California State Veterinary Medical Association. California Polytechnic School, San Luis Obispo, Calif., Jan. 15-17, 1946. F. P. Wilcox, 4219 Kenwood Ave., Los Angeles 37, Calif., secretary.

Louisiana State University and Louisiana Veterinary Medical Association. Annual Short Course. Louisiana State University, Baton Rouge, Jan. 16-17, 1946. A. H. Groth, Department of Veterinary Science, Louisiana State University, Baton Rouge, head.

Illinois State Veterinary Medical Association. Leland Hotel, Springfield, Ill., Jan. 17-18, 1946. C. C. Hastings, Williamsville, Ill., secretary-treasurer.

Iowa Veterinary Medical Association. Hotel Fort Des Moines, Des Moines, Iowa, Jan. 22-24, 1946. C. C. Franks, 720 Grand Ave., Des Moines, Iowa, secretary.

Michigan State College. Annual Conference for Veterinarians. School of Veterinary Medicine, Michigan State College, East Lansing, Jan. 23-24, 1946. Ward Giltner, School of Veterinary Medicine, dean.

North Carolina State College. North Carolina Conference for Veterinarians. 205 Polk Hall, Raleigh, N. C., Jan. 22-25, 1946. C. D. Grinnells, State College Station, Raleigh, N. C., program chairman.

Minnesota State Veterinary Medical Society. Hotel Nicollet, Minneapolis, Minn., Jan. 28-30, 1946. H. C. H. Kernkamp, University Farm, St. Paul 8, Minn., secretary.

Virginia State Veterinary Medical Association. John Marshall Hotel, Richmond, Va., Jan. 28-30, 1946. R. D. Hatch, Department of Biology, Virginia Polytechnic Institute, Blacksburg, Va.

Kentucky Veterinary Medical Association. Kentucky Agricultural Experiment Station, Lexington, Ky., Jan. 31, and Feb. 1-2, 1946. F. M. Kearns, 3622 Frankfort Ave., Louisville 7, Ky., secretary-treasurer.

Connecticut Veterinary Medical Association. Bond Hotel, Hartford, Conn., Feb. 6, 1946. G. E. Corwin, 36 Capitol Ave., Hartford 6, Conn.

Alabama Polytechnic Institute. Annual Short Course for Veterinarians. Auburn, Ala., Feb. 26-28, 1946. E. S. Winters, College of Veterinary Medicine, administrative secretary.

DEATHS

George H. Carr (Colo. '18), Brighton, Colo., died on Nov. 1, 1945.

L. H. Coulson (C.V.C., '12), 65, Elkhorn, Wis., died Oct. 25, 1945. He began his practice of veterinary medicine at Grays Lake, Ill., and after eight years, moved to Elkhorn, where he continued his chosen work until his death.

Roy E. Jackson (Ont., '96), 49, Montgomery, Ala., died Dec. 18, 1945. Dr. Jackson was a pioneer in tick eradication in Alabama, and much credit is due him for the eradication of that pest from the state. He was admitted to the AVMA in 1917.

Daniel C. Martin (C.V.C., '16), 56, Kankakee, Ill., died Oct. 18, 1945. Dr. Martin had been a member of the AVMA since 1917.

Russell F. Presho (O.S.U., '13), 53, Watsonville, Calif., died March 25, 1945. Dr. Presho was admitted to the AVMA in 1940.

THE VETERINARY PROFESSION AND THE WAR

Veterinary Corps, Army of the United States—Brief Account of Its Wartime Task

The following is abstracted from an article by Brig. Gen. R. A. Kelser, director of the Veterinary Division, Surgeon General's Office, published in a special issue of the *Bulletin of the U. S. Army Medical Department*, September, 1945.

During the calendar year 1944, the Veterinary Corps inspected 8,000,000,000 pounds of meat, meat-food products, and dairy products for the Army of the United States and more than 1,000,000,000 pounds for the Navy, Marine Corps, and other departments of the government. Of this quantity 300,000,000 pounds were rejected prior to purchase or when offered for delivery because of failure to meet Army specifications in respect to type, class, or grade, and about 60,000,000 pounds on account of insanitary or unsound condition.

In 1944, these amounts of foodstuffs were 36 per cent more than those of 1943 and 155 per cent more than those of 1942. Certain difficulties encountered in the procurement of such huge quantities of meat are pointed out in connection with the congressional action on the purchase of meats from plants not operating under the federal meat-inspection regulations. In April, 1945, it was found necessary to issue an order (WFA 75-2, Amendment 7) modifying the federal meat inspection standard on the insistence of, and for the benefit of, uninspected abattoirs slaughtering more than 52 head of Army-grade beef cattle weekly, and to direct that 50 per cent of their output be set aside for the Army to purchase. But, there being insufficient veterinary personnel in the federal meat-inspection service to carry out the order, it was necessary to assign Veterinary Corps personnel to make the ante- and postmortem inspection in 75 of these abattoirs, through an agreement between the Secretary of War and the War Food Administrator (*see* ASF Cir. No. 84, Mar. 23, 1944). The modified service was extended to abattoirs slaughtering the smaller animals (lambs, calves, hogs) at the request of the Quartermaster General.

A complication arose from the order (WD Cir. No. 137, May 8, 1945) prohibiting post exchanges, officers' clubs, and civilian messes on Army posts from purchasing critical meat supplies from the Army commissaries. Can the commanders of Army posts legally assign veterinary officers to make ante- and postmortem inspections of uninspected abattoirs for the benefit of these units in the face of regulations (Par. 5a, AR 40-2150) which specify that all meat and meat-food products within the limits of the station must originate from plants under federal inspection? This complication was overcome in part by authorizing post commanders to disregard the letter of the regulation under "exceptional circumstances" and to direct veterinary officers, if available (which was not always the case), to conduct the inspection. A congressional act (Public Law No. 108, 79th Congress) let down the bars to the procurement of meats from any abattoir declared by the Secretary of Agriculture to be operated "under clean, sanitary conditions," but did not provide the additional Veterinary Corps personnel to conduct the expanded inspectional service. A critical situation arose also in regard to the huge amounts of meat, meat-food, and dairy products of lower type and quality purchased by the Army for prisoners of war and civilians in liberated and occupied counties. In order to remove confusion between these and the products for troops, the lower grades were stamped "P-C" below the Veterinary Corps inspection stamp.

Butter, Cheese, Milk

Information reached the Surgeon General's Office that in certain instances, butter and cheese were being accepted without supplementing the organoleptic examination with the prescribed laboratory analyses in respect to butterfat and moisture. When not practical to make such examinations before shipment, subsequent investigations enable the Veterinary Corps to notify the procurement agency of the deficiencies and trace them to the violators of the contract specifications.

On a number of occasions, milk delivered to comply with the specifications of Army Type

II, No. 1, had bacterial counts of more than 1,000,000 per cubic centimeter prior to pasteurization. The Meat and Dairy Hygiene Branch of the Veterinary Division traced the fault to the methylene blue reductase test made at the country receiving platforms instead of at the pasteurizing plants. The value of this test is limited to rough estimation of the bacterial count under different conditions but does not run parallel to the plate count. The latter governs in the case of discrepancies.

As an indicator of proper pasteurization, the phosphatase test was found to be worthy of the highest praise. This test was found to be important because pasteurizing plants operated beyond their normal capacity and some with untrained personnel. As for organisms of the *Escherichia aërobacter* groups, it was found that, before excluding milk on the basis of the coliform test alone, care must be taken in interpreting the results. The presence of *Escherichia-aërobacter* organisms may be due (1) to improper pasteurization, (2) to exceptionally high resistance of the strain, or (3) to postpasteurization contamination.

Interest was taken in the development of frozen whole fluid milk for use on hospital ships. Fresh milk, well-homogenized, and rapidly frozen in quart paper containers was pronounced an excellent product for as long or longer than three months after freezing. After longer periods, precipitation of casein frequently occurred. An advantage of homogenized whole milk over condensed milk is that it retains flavor longer, and requires no reconstitution except thawing. Moreover, the chances of contamination are nil.

Eggs

The Veterinary Corps inspected, prior to purchase, more than 50,000,000 pounds of powdered eggs purchased for the Army in 1944, or 178 per cent more than in 1943. Wholesomeness and safety as food were the objectives. The bacterial count of the powder and the reasons therefor were investigated, particular attention being paid to organisms of the genus Salmonella. A considerable proportion of commercially dried eggs was found to contain such organisms. If present in large numbers in egg powder of relatively high moisture content, the organism may survive for some time and be a health risk unless the powder is well cooked before serving.

Poultry

Another service rendered by the Veterinary Corps was the inspection of poultry at the time of slaughter in poultry dressing plants operated under the supervision of the Poultry Inspection Service, War Food Administration. Poultry should be inspected in the same manner as meat and meat-food products are inspected in establishments operated under the supervision of the Meat Inspection Division, U. S. Department of Agriculture. The specifications formulated for this service included directions for cooking, boning, canning, and processing. The products of the poultry eviscerating plants, operated with veterinary inspection under the supervision of the Marketing and Distribution Branch of the USDA, were accepted.

Minimum Losses and Rejections

Regardless of the exposure to extreme climatic conditions in widely scattered theaters, and the absence of dunnage in many instances, the percentage of losses was small. Of the huge poundage running into billions, rejections between the time of purchase and issue to troops was about 0.68 per cent in the United States and 1.2 per cent in foreign theaters, notwithstanding that great quantities had to be shipped long distances and stored under severe conditions.

Animal Health Service

Despite the limited use of animals, the Corps had to cope with numerous and unusual problems bearing on the efficiency of animals under Army control in overseas commands as well as in the United States. There are always communicable diseases to prevent and control wherever animals are congregated. In the home theater (zone of the interior), rigid, preventive, and immunologic measures played an important part. By vaccinating all of the Army's horses and mules against equine encephalomyelitis, the most serious malady of these animals in this country, the disease was entirely prevented. Tetanus, a relatively common disease of solipeds, was largely prevented by routine administration of tetanus toxoid. Though outbreaks of anthrax have occurred among civilian animals during the past several years, the disease was entirely prevented among Army animals by vaccination. Routine malleinization prevented glanders from appearing among Army animals. The overseas problems were more numerous and difficult. Animals were procured locally where certain grave communicable diseases were widespread, among them surra.

Surra

In the Burma-India theater, the fly-borne protozoan infection, trypanosomiasis or surra, was particularly common during the monsoon season. Officers of the Veterinary Corps followed the pattern of medication used by the British—a toxic dye of unknown composition named "Antrypol" which is comparable to Bayer 205, or germanin. Antrypol was studied at the Veterinary Research Laboratory, Army Remount Depot, Front Royal, Virginia. Trials showed that the drug is markedly toxic to the liver of a high percentage of animals. A new antitrypanosome, now being tested for use

against surra in the Orient, has been developed by Dr. Harry Eagle and associates, of the U. S. Public Health Service. In doses comparable to those used in human trypanosomiasis it showed no appreciable toxic action in horses. A quantity of the new chemical was sent to the Burma-India-China theater for trial in horses and a preliminary report is favorable.

In China, the long duration of war has had an unfavorable effect on animal diseases through lack of drugs and biological products, and serious reverses in veterinary education among Chinese—an obvious disaster in a country so dependent upon animals for transportation. A part of the Veterinary Corps' work was to improve the Chinese veterinary service and to initiate measures for the control of communicable diseases among animals. This service has contributed to the good relations between the two countries. In this war, the importance of animals was greatest in the Chinese theater, where, before the war, the veterinary service was not of a high order and what there was did not survive the long war.

This report is brief and incomplete but nevertheless it contains the basic framework of a complete treatment of the whole subject, namely: (1) the huge quantity of foodstuff which a small personnel inspected; (2) the harmonious coöperation with the industries involved despite the vicissitudes of a global war; (3) the spirit of collaboration with related governmental departments; (4) the practical information obtained on the supervision of great amounts of butter, cheese, milk, poultry and eggs; (5) the importance of laboratory work in food hygiene; (6) the value of veterinary service in building up amicable relations with other countries; (7) the opportunity to study exotic diseases ever threatening to our livestock farmers; (8) the use of animals and their care in military operations; (9) the economy of food inspection and its contribution to the health of the armed forces and other military personnel; and (10) summed up, the need of maintaining veterinary service on a high plane.

Release of Veterinary Officers

New release criteria for Veterinary Corps officers, were announced in ASF Circular 418, dated Nov. 14, 1945. The release will be based on any one, or more, of the following factors.

Adjusted service rating	70 points
Age	42 years
Active duty prior to	Dec. 7, 1941.

This represents a drop of 10 points in the adjusted service rating, but no change in age. It does, however, bring the active duty date down to Pearl Harbor Day, in line with other branches of the medical service. Veterinary officers formerly had been required to show active duty before Jan. 1, 1941, or eleven months longer than other branches.

[The adjustment indicates that Washington is cognizant of the condition with respect to officer personnel, and is taking steps to alleviate the problem as rapidly as military necessity permits.—Ed.]

Veterinary Corps Officers Separated

Col. J. F. Crosby, V.C., has furnished us with the following list of Veterinary Corps officers who have been separated from military service since V-E Day. This list is prepared from the records available in the Office of The Surgeon General, and we hope to have additions from time to time as the number of men released increases.

Alabama

Johnson, Cecil H. Moore, R. O., Jr.

Arizona

Butler, L. N., Jr.

California

Bentham, Wilfred S. Hickman, George P.
Bolenbaker, Roger F. Kerman, Wm. R.
Davis, Robert W. Maude, Stuart H.
Elander, Burman J. Norton, Robert S.
Emminger, Albert C. Sepponen, Carl Matt
Gomez, Frank D. Turner, Clifford W.
Griffith, Robert L., Jr. Twohig, James D.

Colorado

Broadwell, John M. Nagel, John K.
Cooley, Richard S. Turner, Nathan A.

Connecticut

Gilyard, Richard T. Globus, Robert O.
Lorber, Martin G.

Delaware

West, James Rufus

Florida

Brown, Theodore, W. Vara, Joseph J.
Catlett, James G. Wilkinson, Frank B.
Swanson, Leonard E.

Georgia

Arundel, Hugh F. Harman, C. C., Jr.
Dennis, Walter R. Johnson, Leon D.
Griffith, Aaron R. Osteen, Wilson M.
Skinner, Warren L.

Idaho

Penwell, Park Hugo

Illinois

Barr, Theodore M. Guilfoil, Thomas J.
Bly, Howard J. Lusk, Neal D.
Cottral, George E. Miller, Leonard J.
Grossman, Roger Slatter, Ervin Edwin

Indiana

Galloway, Walter G. Nichols, Roy Elwyn

Iowa

Barrett, John T. — Jokerst, Herman A.
Bradt, Raymond K. — Rieke, Glenn W.
Dermody, John M. — Ritter, Earl C.
Snyder, George A.

Kansas

Kennedy, Francis M. — Mossman, Donald F.
Meeks, Robert B. — Smiley, Henry D.

Kentucky

Phipps, Edward C. — Youmans, Ray S.

Louisiana

Hornsby, W. S., Jr. — Thomas, G. O., Jr.

Maine

Levine, Samuel J.

Maryland

Maugel, John P. — Taylor, James K.
Morse, J. B. — Vandeven, John Wm.
Winchester, Ben N.

Massachusetts

Arlein, Myron S. — Johansen, Einer Wm.
Cohen, George — Olson, Carl, Jr.
Shannon, William H.

Michigan

Jensen, Christian G. — Wuellner, Earl J.

Mississippi

Huston, Ben. S.

Minnesota

Cottrell, Grant F. — Schmidt, Clarence P.
Garlie, Adolph O. — Scott, John R.
Gochinauer, Oscar B. — Vollmar, Roland E.
Long, Elmer I. — Zlotnick, Albert M.

Missouri

Brown, Francis H. — Hasson, John R.
Cullinson, James M. — Lindenstruth, R. Wm.
Damer, Eugene F. — Pickett, Charles D.
Garrett, John P. — Schulz, Carl Wm.

Nebraska

Cassidy, Donald L.

New Hampshire

Chase, Carl Eddrie

New Jersey

Kinchelow, Wm. D. — Lawrence, Robert P.
Reinow, Bert

New Mexico

Evans, Tom

New York

Bolin, Walter L. — Klar, John M.
Close, Philip C. — Lawrence, Thomas
Curtin, Charles J. — MacKellar, R. S., Jr.
Ebertz, Charles D. — Nossov, Morris A.
Eichhorn, Ervin A. — Phelps, Harold C.
Ensign, David T. — Shaner, Ralph F.
Fortune, R. LeRoy — Tanenbaum, G. G.
Goldwasser, Harry I. — Wiseman, Edwin S.
Kane, Joseph R. — Woodruff, R. A.

North Carolina

Stafford, W. B., Jr. — Thomson, Burton C.

North Dakota

Bolin, Fonsoe M. — Crawford, Edwin M.
Sadler, Kenneth Earl

Ohio

Bechtol, Lauren L. — Gest, John Frazee
Boyer, Paul E. — Keefer, Wesley O.
Butz, H. Wm., Jr. — Michael, Lloyd J.
Stephan, Sol Galen

Oklahoma

Harkavy, Hyman J. — Mitchell, Albert P.
Shigley, Fred Martin

Oregon

Crow, Wilfred M. — Riker, J. T., Jr.
McQueen, George L. — Shurman, Richard D.
Soderholm, L. G.

Pennsylvania

Abell, Guy F. — Hoffman, William F.
Chrisman, Robert F. — Landis, Paul F.
Gillespie, James H. — Seagers, Wm., J.
Haines, Wm. A., Jr. — Snyder, Arnold M.

South Dakota

Peterson, Vernon S.

Tennessee

Pinckard, Wendell L.

Texas

Booth, Thomas O. — Kothman, Victor L.
Bouton, Jay H. — Lauraine, Loye J.
Burch, George R., Jr. — Lusco, Robert P.
Burke, William Z. — Maier, Elmer A.
Burkey, Fred M. — Martinez, Homer T.
Chapman, Lee R. — Myers, Philip
Chastain, Claude B. — Robinson, Virgil B.
Erisman, Robert E. — Scholle, Carl H.
Fink, Carl — Shipley, Michael
Fisherman, Frank — Spangler, Harold M.
Gearhart, B. F., Jr. — Steeger, Charles J.
Hathaway, James H. — Steinman, Frank C.
Taylor, John W.

Utah

Cole, Elvin George — Geisler, Richard E.

Virginia

Brumble, G. H., Jr. — Sipos, Andrew James
Watson, Douglas F.

Washington

Bailey, Orlen L. — Finch, Dell C.
Canfield, Rolden F. — Guard, William P.
von Glan, Edward H.

Wisconsin

Bennett, Paul C. — Currie, Arthur J.
Cooper, Arthur W. — Law, Buell Stanley
Lang, George K.

Bronze Star Medals Awarded

The following officers in the Veterinary Corps have been decorated with the Bronze Star Medal for meritorious service, according to information released by Colonel J. F. Crosby from The Office of The Surgeon General:

Lt. Col. Chas. H. Kitselman
Captain Herbert L. Marsh
Captain Willard R. Fetzer
Captain Lewis L. Jackson
Captain Jerry T. Martin

Lockhart

Rabies Vaccine

Ovine Origin **Mouse-Tested**

Phenol-Killed

meets all the requirements of a good vaccine. Far surpassing official requirements for potency, it is a sterile, safe, neutral, smooth emulsion and is almost completely *Non-Irritating When Injected.*

Recommended Dosage—

Minimum dose ..... ***5 c.c.***

Dogs between 25 and 50 lbs. weight ..... ***1 c.c. for each 5 lbs. weight***

Dogs over 50 lbs. weight ..... ***10 to 15 c.c.***

Injections should be made subcutaneously.

The metal and paper situation make it essential that supplies of special tags and certificates bearing the veterinarian's name be arranged for early. Special tags and certificates are furnished at nominal cost when veterinarians desiring them contract for an amount of vaccine corresponding to the number of special tags desired.

LOCKHART RABIES VACCINE IS SOLD ONLY TO GRADUATE VETERINARIANS, AND IS NOT SOLD AT A DISCOUNT TO ANY CITY, COUNTY OR STATE GOVERNMENTAL AGENCY.

ASHE LOCKHART, INC.

"Producers of Better Biologicals for Graduate Veterinarians."

800 Woodswether Road **Kansas City 6, Missouri**

Dr. John Shikles, Dearborn, Missouri, inventor of Shikles Syringes, demonstrates vaccination technique.

Jen-Sal

ANTI-HOG CHOLERA SERUM

and

HOG CHOLERA VIRUS

Two field-proved products that always meet these requirements for they are produced in a modern plant under the direct supervision of skilled veterinary technologists and supplied to qualified veterinarians only.

Jen-Sal Serum and Virus are packaged in distinctive, metal-top-and-bottom round containers which minimize breakage, prolong refrigeration and reflect professional quality.

When you specify Jen-Sal, you are assured that indefinable but essential "*Plus Factor*" which means consistent satisfaction with treated swine.

3 *Prerequisites of Successful Immunization*

- Veterinary Supervision and Flawless Technique
- Anti-Hog Cholera Serum of Unquestioned Potency
- Hog Cholera Virus of Maximum Virulence and Purity

Jensen-Salsbery Laboratories, Inc.
Kansas City, Missouri